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An Examination of Pre-K Co-Teacher's' Perceptions and Self-Efficacy in their Present Co-teaching Experiences

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ACCEPTANCE

This dissertation, AN EXAMINATION OF PRE-K CO-TEACHERS' PERCEPTIONS AND SELF-EFFICACY IN THEIR PRESENT CO-TEACHING EXPERIENCES, by NICOLA GAYLE, was prepared under the direction of the candidate's Dissertation Advisory Committee. It is accepted by the committee members in partial fulfillment of the requirements for the degree, Doctor of Education, in the College of Education and Human Development, Georgia State University. The Dissertation Advisory Committee and the student's Department Chairperson, as representatives of the faculty, certify that this dissertation has met all standards of excellence and scholarship as determined by the faculty.

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AN EXAMINATION OF PRE-K CO-TEACHERS' PERCEPTIONS AND SELF-EFFICACY IN THEIR PRESENT CO-TEACHING EXPERIENCES

by

NICOLA GAYLE

Under the Direction of Diane Truscott, Ph.D.

ABSTRACT

This explanatory sequential mixed-methods study focused on pre-K co-teachers' perceptions of co-teaching, the similarities and differences between special and general education co-teachers' perceptions of co-teaching, and the elements of self-efficacy (Bandura, 1977) related to the implementation of the co-teaching model. Analysis of the *Perceptions of Co-Teaching Survey (PCTS)* completed by 34 pre-K special and general education co-teachers served as the quantitative component of the study and was complemented by a constant comparative analysis (Charmaz, 2006) of focus groups with eight co-teachers.

The integrated findings revealed that both special and general co-teachers had moderately positive perceptions of their co-teaching experiences that were nurtured by their professional interpersonal relationships and influenced by the distinctive nature of pre-K classrooms. High self-efficacy influenced co-teachers' motivation and confidence in order to persevere during challenges experienced. Overall, co-teachers recognized the importance of effective verbal communication as key to successful co-teaching experiences and desired personalized

professional learning opportunities to guide and improve their co-teaching experiences. Implications for administrators, teacher educators, and co-teachers were discussed and recommendations for future research offered.

INDEX WORDS: Pre-K, Co-teaching, Co-teachers, Perceptions, Self-Efficacy

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DEDICATION

This research is dedicated to my mom, Marjorie Allen for always believing and supporting my dreams –big or small. You taught me to value education and persevere through challenging times.

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

CHAPTER 1 INTRODUCTION

Overview

Promoting access, quality, and equity in schools today requires more than the best curriculum reforms, quality teachers, and resources. Given the implications of improving educational outcomes for students with disabilities in the United States, policymakers require special and general education teachers to work collaboratively to meet the needs of all students. Historically, students received special education services in predominantly self-contained classes taught by special education teachers. However, in more recent times, efforts are being made to provide inclusive educational opportunities for students with disabilities resulting in instruction by both general and special education teachers in a general education setting (Bowen & Rude, 2006; Danmore & Murray, 2009; Esteves & Rao, 2008; Friend, 2008). When students with disabilities are taught using the same grade-level curricula and are provided with differentiation in instruction as needed, all learners benefit, and this increases their chances of doing well on standardized tests (Hang & Raben, 2009; Maultsby-Springer, 2009). Therefore, the academic successes of students with disabilities depends largely on the quality of learning opportunities provided by teachers willing to both plan and implement instruction collaboratively in co-taught classrooms.

Co-teaching is becoming a common option for service delivery in classrooms for students with disabilities. According to the U.S. Department of Education (2010), the percentage of students with disabilities who were primarily served in co-taught classrooms increased from 33% in 1999 to almost 60% in 2009. This steady growth is expected to surge in the next ten years given the national trend in increased placements of students with disabilities into co-teaching classrooms (Murawski, 2006). This change was advocated by the No Child Left Behind Act

(NCLB, 2001) and the reauthorization of the Individuals with Disabilities Education Act (IDEA, 2004). IDEA's main goal was to ensure that the educational needs of all students with disabilities were adequately supported by school personnel. This stipulation aligned closely with previous requirements put forward by NCLB, which required special education and general education teachers to work collaboratively in co-teaching classrooms. Like NCLB, the IDEA reform also supported co-teaching classrooms as high-quality learning environments that are intended to foster conditions conducive to students' academic growth (Villa, Thousand, & Nevin, 2004). These federal reforms (i.e., IDEA and NCLB), coupled with empirical evidence, indicated that the academic achievements of students with disabilities significantly increased when those students are taught alongside their peers without disabilities (Friend & Cook, 2007; Hamilton-Jones & Vail, 2013; Nierengarten, 2013). The reforms influenced the current changes regarding the participation of students with disabilities in the general curriculum. One response to the increased opportunities for students with disabilities is the use of a co-teaching model.

The co-teaching model is beneficial for all students at different levels of schooling but more salient for early learning classrooms, due to the importance of providing young children with access to high-quality pre-K programs (Gettinger & Stoiber, 2007). Therefore, the goal of education at this significant level of schooling is to recognize that early childhood programs opportunities are tied to long-term academic gains. High-quality pre-K education is considered to have far-reaching implications as a form of economic investment in America's workforce (Daily, 2014; Temple & Reynolds, 2007). Furthermore, longitudinal research (Barnett, Carolan, Squires, Clarke Brown, & Horowitz, 2015; Mostafa & Green, 2012) demonstrated that effective pre-K education is important because it reduces high school dropout rates and special education placements. Therefore, if the ultimate aim of schooling is to provide students with an education

that will develop their full potential, then a solid pre-K foundation is paramount. This is especially true for students who may be eligible for special education services or at-risk for academic failure.

Gettinger and Stoiber (2007) demonstrated that students who were screened and evaluated for disability services were more likely to improve their school readiness skills and be dismissed from special education services. In a more recent research finding, Stevens and English (2016) demonstrated that students disproportionately affected by school failures and found eligible for special education services were those from disadvantaged groups (e.g., students in urban communities from low socioeconomic backgrounds). Therefore, the key to enriching these students' earliest school experiences is the implementation of evidence-based practices that can support their diverse learning needs (Barnett, Carolan, Squires, Clarke Brown, & Horowitz, 2015). Based on this evidence, students with disabilities or students eligible for specialized early childhood programs should be supported across all developmental domains to prepare them for kindergarten. Stevens and English (2016) also argued that students with disabilities need access to well established pre-K programs the most because what they "are facing is not an achievement gap but a life gap" (p. 38). Therefore, expanding pre-K programs at the very core may solve issues affecting marginalized groups and improve these students' educational experiences by giving them a fair chance to succeed.

The National Center for Learning Disabilities (NCLD) implemented the Pre-K Response to Intervention (Pre-K RtI) that was geared to support early childhood programs in pre-K classrooms. This model was similar to the existing RtI approach that was established in 2007 to serve students in K-12 grades. The need for Pre-K RtI grew out of concerns raised by teachers and early childhood scholars who indicated that a similar model to RtI used in elementary grades

was needed and would be useful for students in pre-K settings (Coleman, Roth, & West, 2009). It was argued that many children entering pre-K who may not have had adequate early literacy and social-emotional opportunities in their home environments tend to progress at a slower pace in school than other pre-K students who entered with those skills (Daily, 2016). This modified approach includes evidence-based screenings, interventions, progress monitoring, and tiered instruction to support early learning standards in pre-K classrooms (Coleman, Roth, & West, 2009; Snyder, Wixson, Talapatra, & Roach, 2008). As a result, Pre-K RtI is important since it can help minimize, and in some cases prevent, academic difficulties experienced by many students in elementary grades. A large body of literature (e.g., Coleman, Buysse, & Neitzel, 2006; Gettinger & Stoiber; 2007; Pretti-Frontczak, et al., 2007) has confirmed that the key to supporting students at the pre-K level is to provide theoretically sound early childhood services in their formative years. NCLB recommendations also support pre-K RtI initiatives such as differentiated instructions and access to certified professionals (e.g., special education teachers and speech and language pathologists) to work with students in early learning environments (Daily, 2016). The emergence of these early learning initiatives offers the potential for co-teaching classrooms at the pre-K level. Although co-teaching is developing momentum across many states in the U.S., there is limited literature documenting the importance of a co-teaching model for pre-K classrooms.

As an instructional model, co-teaching represents an ideological and pedagogical shift from a single teacher with the lone responsibility to facilitate teaching and learning (Lortie, 1975) to two teachers (a general and a special education teacher) delivering instruction to a diverse group of students in a single physical space (Cook & Friend, 1995). To date, co-teaching as a whole has provided academic and social benefits for students with and without disabilities

(Burnett & Peters-Johnson, 2004; Mastropieri et al., 2005; Murawski & Swanson, 2002; Villa & Thousand, 2005; Walther-Thomas, 1997). Co-teaching is also lauded for changing the structure and professional dynamics of contemporary classrooms and fostering an intentional long-term collaboration between two professionals (Alvy, 2005; Colburn, Sullivan, & Fox, 2012; Normore & Floyd, 2005).

Effective co-teaching requires redefined instructional roles and responsibilities of both the general and special education teachers, who are expected to work as a team to ensure that different groups of students in their classroom benefit from this symbiotic relationship (Cook & Friend, 1995; Pratt, 2014; Villa, Thousand, & Nevin, 2004). The anticipation co-teaching brings to schools heightens the prospect of two people working together and pooling their expertise to improve the educational experiences for academically heterogeneous groups of students (Bouck, 2007). Therefore, it is easy to understand the prominence co-teaching has received as a "best-practice" pedagogy (McDuffie et al., 2007; Schwab Learning, 2003), built upon the adage that "two heads are better than one." In general, this level of collaboration creates spaces for improving academic and social outcomes for students with disabilities.

Although many co-teachers recognize the invaluable benefits from this partnership, some educators are still reluctant to accept this new collaborative model due to factors such as interpersonal differences, incompatibility, and philosophical differences (Castro, Kelly, & Shih, 2010; VanGardenen, Scheuermann, Jackson, & Hampton, 2009); demarcation of roles performed by each co-teacher (Harbort, et al., 2007; Leatherman, 2009; Santoli, Sachs, Romey, & McClurg, 2008); lack of teacher preparation training and inexperience working in co-teaching classrooms (Pugach & Winn, 2011); and limited school-based support to implement and sustain co-teaching classrooms (Carter, Practer, Jackson, & Marchant, 2009; McDuffie et al., 2007).

The literature reveals factors that might lead teachers to perceive co-teaching negatively (Hang & Rabren, 2009; Naraian, 2010). For example, Pugach and Winn (2011) emphasized that despite numerous benefits offered by co-teaching, both novice and expert teachers could be affected by the challenges perceived or experienced, which may significantly influence their abilities to perform effectively in co-teaching classrooms. Friend and Cook (2010) also indicated that even though many co-teachers possess high-quality pedagogical skills, they may enter co-teaching classrooms with negative beliefs and misperceptions about co-teaching. One such reason frequently found in the co-teaching literature is that some teachers are unwilling to relinquish their respective autonomies as sole classroom leaders and to share that privilege in co-teaching classrooms (Austin, 2001; Flesner, 2007; Keefe & Moore, 2004). This reluctance may be profoundly linked to how teachers perceive co-teaching.

A classroom where both teachers hold positive perceptions (i.e., each teacher's opinions and impressions) about co-teaching is said to be a critical element required to build and sustain successful partnerships in co-teaching classrooms. Some studies (Austin, 2001; Bessette, 2007; Dieker, 2001; Rea, McLaughlin, & Walther-Thomas, 2002) examined special and general education co-teachers' perceptions of co-teaching in K-12 settings and identified this phenomenon as a defining feature for understanding the potential successes and challenges of this teaching methodology. Other studies reported that both teachers typically have positive perceptions of collaborative approaches; however, in some cases general education teachers reported lower scores (Damore & Murray, 2009; DeSimone & Parmar, 2006) than their special education counterparts on teacher perceptions surveys. Factors that promote positive perceptions among co-teachers were usually evident when both teachers received prior training, were given administrative support, and had scheduled planning time (Scruggs, Mastropieri, & McDuffie,

2007). Even with the absence or presence of some of these critical components, it is important for co-teachers to perceive "the act of sharing a single space and teaching practices as a delicate dance between two teaching partners as they attempt to implement instruction without stepping on each other's toes" (Martin-Beltran, Peercy, & Selvi, 2012, p. 117).

The core of a co-teaching model requires a shift in thinking and pedagogical practices, which places multiple expectations on both teachers. Therefore, co-teaching should not be viewed as the final product or simply an instructional model. Dahlam and Hoffman (2012) argued against this misconception and professed that co-teaching is a "multilevel process of collaboration" which involved every step toward implementation (p. 43). Aiming for solely the final product [implementation] will "ignore the important features in each local context: its people, strengths, and weaknesses" (Dahlam & Hoffman, 2012, p. 43). Therefore, the relationship between co-teachers' perceptions and their individual daily practices is a feature of co-teaching that should be broadly explored and is particularly warranted at the foundational stages of early learning. Focusing on the role of perception can help shed light on not just co-teaching as an instructional model but the overall processes involved. Throughout this process of inquiry, it would also be equally important to examine other inherent factors like each teacher's confidence in his/her ability to successfully carry out the task of co-teaching.

For that reason, a major factor to take into consideration is the influence of co-teachers' self-efficacy skills in co-teaching and how this concept might influence co-teachers' perceptions of co-teaching. The concept of self-efficacy was developed by Albert Bandura, who defined self-efficacy as the belief that an individual is capable of performing a particular task to attain a goal (Bandura, 1986). This means that teachers can achieve tasks they set out to accomplish based on their own judgment of their capabilities. Generally, there is a reciprocal relationship

between teachers' requisite skills and knowledge to perform a task and their personal conviction that they can successfully achieve that task (Bandura, 1977). Research indicated that teachers with moderate to high self-efficacy in teaching have the confidence needed to perform instructional tasks competently, which significantly affects the quality of instruction and their students' learning (Pajares, 1996a; Tschannen-Moran & Woolfolk Hoy, 2001). These teachers will take more risks, persist despite failures, and welcome new collaborative ventures like co-teaching. As a result, teachers will be more inclined to take on the task of co-teaching if they believe they can do so successfully. On the other hand, teachers with low self-efficacy may avoid or perform poorly in co-teaching, which might exacerbate the problem of improving the quality of learning students receive in co-teaching classrooms. Therefore, this study is rooted in Bandura's Social Cognitive Theory, which demonstrates the sources of efficacy beliefs and the implications for how well co-teachers' perform their roles. Self-efficacy is essential to understand and explain the connection between co-teachers' perceptions and their own judgments about co-teaching.

Statement of the Problem

Based on research established in the co-teaching literature and its current popularity, at a glance, it may seem like co-teaching is the perfect solution to address previous attempts to implement and sustain inclusionary services to support the educational needs of the diverse student population. However, Scruggs, Mastropieri, and McDuffie (2007) categorized four recurring challenges experienced by both general and special education co-teachers including: (1) Administrative Support, (2) Volunteerism, (3) Scheduled Planning Time, and (4) Team Compatibility. Most of the published literature on co-teaching focused on and provided rich description of co-teaching in upper elementary (e.g., Baker & Zigmond, 1995), middle school

(e.g., Kruse & Louis, 1997; Walther-Thomas, 1997), and high school (e.g., Tiwari, Das, & Sharma, 2015; Weiss & Lloyd, 2002). While these studies documented well-established concerns in the co-teaching scholarly debates, the literature on co-teaching thus far has failed to take into account the impact co-teachers' perceptions of co-teaching, specifically co-teachers in the pre-K context, and the overall quality of their experiences.

It is important for research to focus on publicly funded pre-K co-teaching programs, due to the rise in the number of students in these classrooms and the growing interest among policy makers in promoting early childhood classrooms and improving the taught curricula for students in these settings. Research studying different phenomena in pre-K tends to focus on teacher quality (Peisner-Feinberg, Schaaf, La Forett, Hildebrandt, & Sideris, 2014; Weiland & Yoshikawa, 2013), student achievement (Campbell & Ramey, 1995; Fitz, 2008; Gormely, Williams, Gayer, Phillips & Dawson, 2005; Reynolds, 1995), parents/caregivers (Mostafa & Green, 2012; Olsen, 2006), and quality pre-K programs (Campbell et al., 2012; Lipsey, Hofer, Dong, Farran, & Bilbrey, 2013) to expand long-term outcomes nationally.

Among the 45 state-funded pre-K programs (Barnett, Carolan, Squires, Clarke Brown, & Horowitz, 2015), several studies (e.g., Stevens & English, 2016; Weiland & Yoshikawa, 2013) revealed that there is a need to support the advancement of national goals to overcome disparities such as improving the quality of learning opportunities for students with disabilities. This can be done by examining what takes place inside state-financed pre-K classrooms and how research can help foster promising changes. To guide this process, research must then answer core questions, such as how to strengthen the overall effectiveness of student outcomes in pre-K by investigating the influence of co-teachers' perceptions and their self-efficacy in co-teaching. Conducting an investigation that highlights "transparency and moves beyond a narrow focus like

improving academic skills among pre-K students" (Stevens & English, 2016, p. 34) is a step in the right direction to strengthen long-term plans towards quality and equitable education in pre-K settings.

While this may be considered to be a small issue affecting the overall quality of conventional early childhood programs in the U.S., it is equally important to shed light on how new instructional approaches (such as co-teaching) are influenced by pre-K co-teachers' perceptions to inform lasting effects. Ideally, when both teachers hold positive views about co-teaching and see it as an influence and not a hindrance to maximize teaching and learning outcomes, co-teaching experiences become less challenging (Austin, 2001; Keefe & Moore, 2004; Harbort et al., 2007; Washburn-Moses, 2005). Therefore, this research can identify the critical role of self-efficacy and the influence it has on co-teachers' perceptions, and ultimately this might lead to changes to improve the full potential of co-teaching at the pre-K level.

Research Questions

The primary purpose for most educational institutions is to ensure that all their students receive the learning opportunities needed for academic and career success. As a result, the teaching and learning environment offers numerous modifications and accommodations to facilitate this goal. Co-teaching is one such instructional modification proposed to provide a viable option for numerous school districts to allow students with disabilities to have equal access to the general education curriculum (Fenty, McDuffie-Landrum, & Fisher, 2012). In adherence to NCLB (2001) and IDEA (2004) mandates, many schools hastened to make the necessary changes to improve academic outcomes by implementing co-teaching classrooms. However, without the appropriate framework in place, co-teaching may not be beneficial for students with special education needs if co-teachers hold misperceptions about this teaching

model. Research findings have consistently revealed that when co-teaching is ineffectively implemented, teaching and learning may be greatly compromised (Friend, Hurley-Chamberlain, & Shamberger, 2010).

This research explored pre-K co-teachers' perceptions of co-teaching, highlighting similarities and differences between pre-K general and special education teachers' perceptions of co-teaching, and examined the extent to which these perceptions are influenced by elements of their self-efficacy in co-teaching. The findings of this research have the potential to shed light on this phenomenon and also to help broaden insights on needed interventions to minimize misperceptions held. Therefore, this research addressed the following questions:

1. How do pre-K co-teachers (both general education and special education co-teachers) perceive co-teaching in their present co-teaching classrooms?
2. What are the similarities and differences in pre-K general and special education co-teachers' perceptions of co-teaching?
3. What elements of self-efficacy influence pre-K co-teachers' perceptions of co-teaching?

Purpose of the Study

The purpose of this explanatory sequential mixed methods study was to explore 34 pre-K general and special education co-teachers' perceptions of co-teaching in their current co-teaching experiences across 21 classrooms in a large urban school district. This study also sought to explain the extent to which pre-K co-teachers' perceptions are influenced by their self-efficacy in co-teaching. Exploring each co-teacher's perception can help to understand this complex phenomenon (Austin, 2001; Cook, B.G., Tankersley, Cook. L., & Landrum, 2000; Praisner; 2003). Therefore, to truly influence the successful long-term implementation of this teaching

model, this research sought to explore challenges experienced by pre-K co-teachers due to individual perceptions held about co-teaching. Furthermore, this phenomenon is not extensively researched among this particular population of teachers, which might lead to new understandings about this component of co-teaching.

This study investigated the perceptions of both general and special education co-teachers' (34) who currently work in co-teaching classrooms. Studying both the general and special education co-teachers who worked in the same context painted a bigger picture to depict similarities and differences between co-teaching these two groups; and how each co-teacher perceives the co-teaching experience. Several studies (Basset & Smith, 1996; Buewll, Hallam, Gamel-McCormick, & Scheer, 1999; Shoulders & Krei, 2016; Silverman, 2007) have shown that the demand for two people to educate a class of diverse learners is a priority in co-teaching classrooms. Therefore, understanding pedagogical and philosophical connections and incompatibilities between both teachers is crucial in the teambuilding process. For instance, some research (e.g., Leatherman & Niemeyer, 2005; Roberts, 2004) revealed that special education teachers tend to show more preparedness and confidence to support and take on the role of co-teaching than their general education counterparts. According to Moffett (2000), the differences between both professionals' perceptions can compromise the planning and instruction needed to support each other and serve students. In addition, in this particular research, it is critical to examine the interplay between pre-K co-teachers' perceptions and their self-efficacy in co-teaching. Intentionally doing this may lead to an in-depth understanding of the direct connection between co-teachers' perceptions and their self-efficacy skills in co-teaching and how this perceived self-efficacy might impact their overall experiences in their pre-K classrooms (Bandura, 2006; Schunk, 1991).

An explanatory sequential mixed methods design was used, and involved the collection of quantitative data followed by qualitative data. A rationale for using an explanatory sequential mixed-methods design is to examine co-teachers' perceptions of co-teaching in their current pre-K classrooms in a large urban school district to gain both objective and narrative understanding of this problem. In the first phase, survey data were collected from 34 co-teachers (19 special and 14 general education) using a validated perception instrument, the *Perceptions of Co-Teaching Survey* (PCTS). Results from the quantitative phase were used to select eight participants for focus group discussions which helped to generate deeper insights into co-teachers' perceptions within this unique context. Overall, this research can be useful to inform subsequent research, policy, and practice among pre-K co-teachers to capitalize on the full potential of co-teaching.

Significance of the Study

Nationally, co-teaching is one of the most utilized models of instructions for students with disabilities across all grade levels (Cramer & Newin, 2006; Kloo & Zigmond, 2008; National Center on Restructuring and Inclusion, 1995). Emerging research findings support the importance of teachers' attitudes (Dieker, 2001; McDuffie, 2007) and satisfaction (Danmore & Murray, 2009; Kohler-Evans; 2006; Lucker, 1999; Scruggs et al., 2007) in their co-teaching experiences. While numerous research studies explored the potential successes of co-teaching (Esteves & Rao, 2008; Friend, 2008a; Hines, 2001; Kloo & Zigmond, 2008; Magiera & Zigmond 2005; Muller, Katz, & Dance, 1999), there was no study found that explored co-teachers' perceptions among the pre-K population, and how these perceptions influenced co-teaching implementation (Austin, 2001; Bunch & Valeo, 2009; Friend, Cook, Hurley-Chamberlain, & Shamberger, 2010).

Researching the perceptions co-teachers hold about the co-teaching partnership should reveal how those beliefs might influence their teaching and learning experiences in their co-teaching classrooms. Positive views held by both co-teachers regarding collaboration is a key factor in promoting optimal learning outcomes for all students. However, many teachers may enter co-teaching arrangements with very little practical experience and theoretical understanding, which may prompt them to feel unqualified to provide the best learning environment for diverse learners. These and other factors usually influence unfavorable beliefs about co-teaching and its effectiveness as a whole. Negative perceptions about co-teaching are said to be one of the most daunting unforeseen threats to successful co-teaching experiences (Austin, 2001). Therefore, studying this phenomenon among special and general education teachers in co-taught pre-K classrooms can lead to deeper understanding of some reasons why co-teachers hold positive or negative perceptions, the similarities and differences between general and special education co-teachers' perceptions, and what sources of self-efficacy influence these perceptions.

Definition of Terms

Inclusion: The belief system shared by every member of a school as a learning community, often based on a mission statement emphasizing the commitment to educate all children so they can reach their full potential (Friend, 2006).

Inclusion education environment*:* Settings where diverse groups of learners feel welcomed, teach, and learn from each other, and are actively engaged in a supportive environment in order for all students (with and without disabilities) to achieve at higher levels (Skoning, 2007).

Collaboration: Direct interaction of two co-equal parties voluntarily engaged in a shared decision-making as they work toward a common goal (Friend & Cook, 2007).

Co-teaching: Service delivery method in which two (general and special education teachers) professionals delivering substantive instructions to a diverse, or blended, group of students in a single physical space (Cook & Friend, 1995). These teachers are equally responsible for education and well-being of students with and without disabilities.

Perceptions of co-teaching: Special and general education co-teachers' beliefs, opinions, and impression of co-teaching as an instructional model.

Self-efficacy: An individual's expectation that s/he will be able to perform actions required to bring desired outcomes (Bandura, 1977).

Teacher efficacy beliefs: Teachers' confidence in his or her capabilities to organize and execute courses of action required to successfully accomplish a specific teaching task in a particular context (Tschannen-Moran & Hoy, 1998). Although several definitions on teacher efficacy beliefs have been proposed, this study will use this definition throughout.

Pre-kindergarten (Pre-K): Used interchangeably with pre-K, which is a classroom that focuses on building child's social, cognitive, emotional, and physical development of four and five year olds.

Individuals with Disabilities Education Act (IDEA): Individual with disability act is a law that governs how schools provide services for to children and students with disabilities birth through 21 in schools (US Department of Education, 2015).

No Child Left Behind (NCLB): An act passed in 2001 by the United States Congress reauthorizing the Elementary and Secondary Education Act which included setting high standards and goals to improve outcomes for individual students (U.S. Department of Education, 2015).

Special education teacher*:* A certified teacher who provides individualized services (modification and adaptation of the general curriculum) to children with disabilities.

General education teacher: An elementary level teacher who teaches content knowledge subject to students in who participate in the general curriculum.

Students with disabilities: Students who require special education services based on their eligibility under a disability category. This limits them to fully participate in the general curriculum without specialized support (U.S. Department of Education, 2015).

Overview of the Study

This chapter describes the background to the problem, which includes inception of co-teaching, statement of the problem, research questions, and the significance of studying pre-K co-teachers' perceptions of co-teaching. The following chapters include: Review of the Literature, Methodology, Results, and chapter 5 focuses on the Discussion and Implications. Chapter two focuses on the academic contribution on relevant findings, methodologies, and theories about what is currently known about co-teaching. It presents the historical trends in co-teaching, benefits and challenges of co-teaching, perceptions of co-teaching, and the connection between co-teachers' perceptions and self-efficacy in co-teaching. Chapter two also outlines Social Cognitive Theory as the theoretical lens used to guide this research. The research framework in chapter three provides a systematic layout of how the study was carried out and rationale for each step proposed. Chapters four presented the findings of this study and chapter five offered discussions and implication about the findings presented.

CHAPTER 2 REVIEW OF THE LITERATURE

The United States Department of Education (2015) anticipated meeting the goal of having at least 90% of students with disabilities educated in general education classrooms for a minimum of 80% of the school day. Historically, general and special education teachers have worked inside the same buildings without collaborating professionally to plan lessons to meet the diverse needs of their students. This practice was an entrenched norm that became difficult to change, even after the inception of co-teaching over a decade ago (Mostert & Crockett, 2000). The philosophical foundation of co-teaching challenges segregation in classes based on students' academic abilities and encourages heterogeneity in typical general education classrooms. Therefore, differences in abilities among students should not be perceived as attributing any greater or lesser value to a co-teaching classroom, and in fact are more likely to promote positive perceptions about each student's abilities. According to Cushner, McClelland, and Stafford (2009), this approach supports an egalitarian view of the learning environment as valuing all students equally. However, to transfer the positive changes brought about by co-teaching to traditional classrooms, both general and special education teachers should possess high levels of commitment, quality pedagogical skills, and positive attitudes to perform the new roles required of them. More specifically, they must believe in their collective efforts to competently carry out the task of co-teaching (Bandura, 1986).

This chapter is divided into five sections that review the literature on research probing the topic of co-teaching and its prospects for improving the scope of teaching and learning among students with disabilities. Section one highlights the multifaceted historical trends in services for students with disabilities and provides three criteria for the promotion of co-teaching classrooms: (1) Improved Instructional Outcomes, (2) Required by Law, and (3) Increased Need for

Specialized Support. Section two describes co-teaching as an instructional model, types of co-teaching approaches, roles and responsibilities of co-teachers, and what emerge from the co-teaching literature as the necessary components for effective co-teaching. Section three discusses some of the benefits and challenges of co-teaching. Section four discusses literature on teachers' perceptions of co-teaching and demonstrates the role of self-efficacy in co-teaching. Finally, section five discusses Social Cognitive Theory as the central lens guiding this research.

A keyword-based computerized search was conducted in spring and fall of 2015 to investigate the state of the co-teaching field. The entire search was carried out using Georgia State University's Library online database. The search criteria included: (1) all years, (2) no publication date limit, and (3) articles from peer-reviewed journals. The preliminary search targeted a combination of the keywords "co-teaching," "co-teacher," "team-teaching," "perceptions of co-teaching," "self-efficacy in education," and "co-teaching classrooms," which yielded a vast amount of articles. It is important to note that approximately 70% of the research studies investigated types of co-teaching, benefits of co-teaching, challenges in co-teaching classrooms, and teachers' experiences of co-teaching. The search results were not surprising since the co-teaching field is relatively new and as a result many scholars have been keen to assess the effectiveness of this federally supported instructional model. Moreover, the participants in these studies found were almost exclusively from upper elementary, middle, high schools, tertiary classrooms, with none that exclusively studied early childhood classrooms (e.g., pre-K).

However, the co-teaching literature has recently shifted towards investigating teachers' perceptions of co-teaching. Although still in its infancy, this particular topic continues to gain prominence due to its potential to shape the overall quality of teaching and learning in co-taught

classrooms. Additional searches including the keywords “co-teaching in pre-K,” “co-teaching in preschool,” and “co-taught classrooms in early childhood classrooms” in the 2000-2015-time frame generated no results. Furthermore, in-depth iterative searches were done to narrow the focus to specific books, research journals, and dissertations about foundations of special education services up to present day co-teaching methodology.

Historical Trends of Services for Students with Disabilities

The journey to providing specialized educational services in local schools for students with disabilities began in 1975 with the passage of the Education of All Handicapped Children Act was passed. This reform allowed children with disabilities to be educated in their local community schools. This milestone in special education’s history provided the foundation for numerous models and placement options currently available for this population of students. The students identified as having disabilities were accompanied to resource rooms for specialized educational services. Pull-out to resource rooms used extensively across the United States to provide structured instruction for students with disabilities from the late 1950s through the 1980s (Weiderholt & Chamberlain, 1989). Segregating students with disabilities within the confines of their school was accepted and seemed to address those students’ educational needs, as opposed to segregation outside the school walls i.e., in separate schools (Gerber, 1996; McMillian & Hendrick, 1993).

In the resource room model, a special education teacher accompanies some students with disabilities to a separate room away from the general classroom in order to plan, instruct, and assess activities based on students’ needs. For example, Madden and Slavin (1983) found that this teaching model was considered by some policy makers to be the most promising for improving performances of students with disabilities. Providing specialized materials and

one-on-one instruction seemed to improve students' self-esteem and their opportunities to learn. One of the justifications at the time for teaching students with disabilities in self-contained and pull-out models was the benefit of small class sizes when compared to the regular general education classroom with an average of 25 students in each classroom. However, some researchers voiced their objections to the ways in which students with disabilities were educated. For example, Madden and Slavin (1983) asserted that the pull-out approach using a resource room model gave students who needed more time to process complex skills an advantage over push-in models and other inclusive initiatives. In contrast, Wang, Reynolds, and Walberg (1986) argued that the pull-out model encouraged compartmentalized learning. Subsequent research findings have supported the overall consistent benefits students with disabilities receive when they are taught alongside their peers without disabilities (Appl, Tropha, & Rowell, 2001; Willrodt, 1995; Vaughn, Elbaum, & Schumm, 1996). Numerous unanswered questions about inefficiencies among popular instructional approaches used to teach students with disabilities prompted arguments for equitable instructional approaches to support and maximize student learning.

Rationale for Co-Teaching

With the steady increase in size and diversity of the student population in the United States, policymakers have been under pressure to respond appropriately to meet these changing needs. Co-teaching is seen as a potential solution for meeting the academic burdens and accountability standards created by federal law (Bowen & Rude, 2006; Van Garderen et al., 2009). In light of this multidimensional professional obligation, the literature highlights three main areas that underscore the need for professional collaboration and more specifically for

co- teaching: (1) Improved Instructional Outcomes for marginalized groups of students, (2) Required by Law, and (3) Increased Need for Specialized Support.

Improved Instructional Outcomes for Marginalized Groups of Students

Historically, special and general education teachers have been accustomed to closing their classroom doors and teaching their respective students in isolation from each other. This isolation negatively affects teachers' professional development and growth in their instructional quality and ability to work cooperatively with other teachers (Dufour, 2004; Van Garderen et al., 2009; Washburn-Moses & Frager, 2009). Additionally, when two teachers continuously work in seclusion, there are no opportunities for them to benefit from mentoring and peer modeling (Englert & Tarrant, 1995). For many years, general and special education teachers have been comfortable teaching in separate classrooms (Naraian, 2010), without opportunities to plan lessons and share the responsibilities of teaching a diverse group of students for an entire year. This isolation, among other school-wide obligations, limits teachers' access to resources and support to meet the needs of their learners (Cook & Friend, 1995). Many general education teachers, despite their efforts to serve diverse ability levels in their classrooms, met barriers due to their inability to provide individualized instructions to meet each student's academic needs. Johnson and Pugach (1996) revealed that general education teachers eventually became frustrated and felt frustrated when students in their classrooms continued to fail, and this feeling of frustration left them unprepared to tailor instructions to meet some students' needs.

With the increase in students with disabilities being served in general education classrooms, general education teachers expressed a desire to work in close collaboration with special education teachers to improve instructional outcomes to support all learners with disabilities (Timmons, 2006). According to Scruggs et al., (2007), improving the education of

students with disabilities in public schools should be the primary goal of every learning institution. Therefore, providing the resources needed to build and sustain this educational teamwork can lead to promising changes in students who receive such academic supports. Additionally, it would also help to minimize the practice of segregation in schools and create more academic opportunities for this population of students. The need for collaboration between all professionals to support students with disabilities in general education settings prompted federal education officials to include provisions in the No Child Left Behind Act (NCLB, 2001) to encourage stronger collaborative ties.

Required by Law

The passing of NCLB (2001), coupled with the reauthorization of the Individuals with Disabilities Education Act (IDEIA, 2004), echoed the need for instructional collaboration throughout schools nationwide and gave birth to the co-teaching movement. Federal legislation now requires schools to provide Least Restrictive Environments (LRE) for all students with disabilities (Fenty, McDuffie-Landrum & Fisher, 2012). Therefore, general education classrooms were considered viable as long as the necessary support systems were in place to provide services to meet all students' educational needs.

With the initiation of NCLB and re-modification of IDEA, school personnel and teachers were expected to hold higher expectations for students with disabilities. Both mandates promoted opportunities for some students with disabilities to be taught in general education settings by both the general and special education teachers. This professional collaboration required both teachers to plan, teach, and assess all students, which disrupted previous historical trends in teaching and learning carried out in isolation (Carter et al., 2009; Kirtikos & Birnbaum, 2003; Paulsen, 2008). Even though both mandates did not specify the exact roles each teacher should

perform, it was clear that both professionals would work closely together to fulfill the needs of all students in their co-taught classrooms.

As a result of these federal stipulations, schools are now more strictly evaluated based on the performances of their students. Therefore, all students with disabilities can participate in standardized assessments like their peers without individualized education plans (IEPs). In the past, the academic performances of students with disabilities could be overlooked; however, with the passing of NCLB (2001), teachers and school administrators are held accountable for meeting performance requirements. As a result, school personnel must comply with federal mandates and make decisions to allow students with disabilities to participate in the general education curriculum (Kerzner-Lipsy, 2003). Therefore, efforts to encourage teachers (general and special educators) to participate in co-teaching and support the educational journeys of students with disabilities should not only be a volunteer endeavor but a true sign of partnership. Admittedly, this shared goal may be challenging to implement; nevertheless, it was deemed appropriate for catering to the diverse learning needs in classrooms across the United States. To facilitate this objective, it would be necessary to have more general and special education teachers who are trained to meet this new collaborative mandate.

Increased Need for Specialized Support

With the intensity of instructional and assessment demands to improve academic outcomes placed on teachers, many students were left on their own to either sink or swim. Remediation options were few, and, as a result, teachers recognized that some students who were consistently performing below grade levels would be considered for special education services. Though this practice liberated teachers from pressures from administrators and parents, it also encouraged many students to be disproportionately placed in special education services under the

category of learning disability. Being placed in special education was seen as a quick fix to support students who were not grasping concepts taught in general education classrooms.

Lyon et al. (2001) found that the first level of intervention for students who were struggling to learn academic content should not result in immediate placement in self-contained classrooms. These authors also pointed out that this practice was unwarranted and an ineffective demonstration of evidenced-based practice. Other research revealed that a support system inside general education classrooms would be a better alternative to assist students who experience learning challenges (Carter et al., 2009; Conderman & Johnson-Rodriquez, 2009). Subsequently, school systems needed to find a way to support students in the general education classrooms. One approach that emerged during this time (reauthorization of IDEA in 2004) was the federally mandated Response to Intervention (RtI) program. RtI was created to screen all students' present levels of academic performance to identify those who are not performing at grade level, then to support their academic and behavioral needs by providing them with appropriate levels of instruction with on-going data-driven evaluations.

Response to intervention (RtI). RtI is a multi-tiered support system with the intent to provide numerous instructional opportunities for students at risk of academic failure (Batsche et al., 2005). As a result, RtI became a widely used option to support the educational growth of academically struggling students. The first tier involves students being taught exclusively in the general education classroom with repeated screenings, among other academic interventions. Based on the students' progress, they will either transition to the second tier or rejoin their peers doing similar grade level work. In the second tier, students whose performances did not show any improvement are given small group instruction and multiple screenings. In the third and last tier, students transitioned from tier two based on their performance. At this level of intervention,

teaching and learning are mostly individualized, and students who are still considered to be underperforming are referred to special education services using data obtained during all three tiers.

VanDerHeyden and Witt (2005) contended that this mandate was necessary and proposed strategic support for teachers working with students who may be eligible for special educational services due to their low academic performances. The advent of RtI brought about changes in how both general education and special education teachers plan instruction, teach, and assess their students. Teachers were required to demonstrate evidenced-based practices and data-driven instructional interventions that supported differentiated instruction to provide multi-tiered opportunities for students who may be at risk of failing. However, to successfully coordinate and accomplish these academic ventures, all teachers would have to participate with some degree of equity. Therefore, RtI serves two functions: (1) to meet the needs of students who require special education support, and (2) to bridge the collaboration gap between general education and special education professionals (Batsche et al., 2005; Vaughn & Fuchs, 2003). Due to similar academic concerns found in pre-K settings, there was a need to implement RtI in these settings to minimize many of the academic failures encountered by students in elementary grades.

Pre-K RtI was established as an early childhood initiative due to concerns raised by teachers and early learning scholars who indicated that a similar model was needed and would be useful for students in pre-K settings (Coleman, Roth, & West, 2009). This modified approach includes evidence-based screenings, interventions, progress monitoring, and tiered instructions to support early learning standards in pre-K classrooms (Coleman, Roth, & West, 2009; Snyder, Wixson, Talapatra, & Roach, 2008). Many children entering pre-K who may not have had adequate early literacy and social-emotional opportunities in their home environments tend to

progress at a slower pace throughout school than pre-K students who entered with those skills (Daily, 2016). All these factors established the rationale to promote a permanent need for co-teaching across all grades as the instructional model necessary to maximize teaching and learning that will cater to the diverse needs of students in classrooms.

Co-teaching Model

Isolating teachers and students will not optimize teaching and learning in this new era. Given what we know about the benefits of partnerships among teachers, there should be more initiatives to create and maintain successful co-teaching classrooms. The notion of a teacher solely planning and researching activities for his/her students is outdated and contrary to evidence-based practice. Nevertheless, navigating the terrain toward successful co-teaching experiences has produced mixed and inconclusive results (Murwaski & Swanson, 2001). Therefore, it is believed that once the fundamental issues that prevent successful collaboration are resolved, positive results will surface (Friend & Cook, 2007).

Co-teaching emerged from the teacher collaboration model based in the philosophy that teaching and learning should involve heterogeneous groups of students and teachers working together to maximize educational goals. This teamwork model is considered to be more effective than other instructional models used to teach diverse groups of learners (Friend, Cook, Hurley-Chamberlain, & Shamberger, 2010). The pragmatic approach of having both a special education teacher and a general education teacher providing instruction to all students in the same classroom was thought to be beneficial to all learners. Cook and Friend (1995) coined the term "*cooperative teaching"* and subsequently shortened it to "*co-teaching.*" Their initial definition of co-teaching described the teaching model as "two or more professionals delivering substantive instructions to a diverse or blended group of students in a single space" (p. 2). In recent times the

definition has changed to reflect the modifications in roles and methods of delivery by these professionals (Friend, 2008).

Most co-teaching literature uses the official definition by Cook (2004), who defined co-teaching as an instructional approach where two teachers, one general education teacher and one special education teacher, share instructional responsibilities for a single group of students within the same classroom with joint accountability and participation. For this reason, co-teaching is not the same as collaboration, team teaching, or inclusion. Simpson, Thurston, and James (2014) pointed out that a recurring misconception among teachers and school administrators is the belief that co-teaching is synonymous with these terms and that they can be used interchangeably to describe co-teaching classrooms. Due to this confusion, co-teaching is often interpreted and implemented contrary to Cook's (2004) definition. While co-teaching is an essential part of collaboration, team teaching, and inclusion, these terms should not be used to denote co-teaching as a whole.

Approaches in Co-teaching

Pioneer scholars in the field of co-teaching have identified and disseminated a number of co-teaching approaches that can be used in co-taught classrooms (Friend & Cook, 2007; Sands, Kozleski, & French, 2000; Vaughn, Schumm, & Anguelles, 1997; Walther-Thomas, Korinek, McLaughlin, & Williams, 2000). Table 1 illustrates the six approaches in co-teaching: (a) one teach, one assist, (b) parallel teaching, (c) alternate teaching, (d) station teaching, (e) whole class + small group, and (f) team teaching.

Table 1 Approaches in Co-Teaching

Co-teaching Models	Description	General Education Teacher	Special Education Teacher
One Teach, One Assist	One teacher is responsible for the whole class. One assists instruction while the other teacher monitors student work or provides short (1-2 minute) instructional support during independent group times.	Lead Teacher	Support
Parallel Teaching	The class is split into two equal groups of about 10-12 students. Groups are not created based on student need and instead remain heterogeneous. Each teacher delivers the same material to his/her group. This model provides opportunity to increase student participation and interaction with a teacher.	Lead a group	Lead a group
Alternate Teaching	The class is split into two groups based on students' performances in a subject area. This model is most often used when group of students requires re-teaching, while another group is ready for extension activities.	Lead Teacher (usually extension lesson) Lead Teacher	Lead Teacher (usually re-teaching lesson) Lead Teacher
Station Teaching	4-5work stations are set up throughout the classroom. Small groups of 3-5 students rotate among the work stations. Several groups may be heterogeneous, whereas 1 or 2 groups are homogenous based on instructional need. Each teacher leads instruction at a table, providing every student in the class an opportunity to engage in small-group instruction with lead teacher.	Lead Teacher of Whole Class	Lead teacher of Small Group
Whole Class + Small Group	The lead teacher instructs the whole class while the support teacher works with small group of students who may require re-teaching or alternate teaching methods. The small groups may remain or leave the classroom to a quieter location.	Lead teacher of the whole class	Lead teacher of the small group

Team Teaching	Teachers work together to teach a whole-class lesson. One teacher may take the lead role, while the other interjects information or questions, makes clarifications, or re-states information to increase understanding among all students.	Lead teacher	Lead teacher

Usually, each team of co-teachers decides which approach works for their particular instruction, activity, and groups of students. To date, the co-teaching literature has not generated any findings to establish which approach is the most effective (Friend et al., 2010). However, "*one teach, one assist"* was observed to be the most frequently used approach (Friend et al., 2003). Arguments in support of this widely used co-teaching approach stemmed from the perception that special education teachers' strengths lie in assisting and monitoring behaviors while general education teachers have the content knowledge to lead instruction (Scruggs et al., 2007). A contrary explanation offered was that some special education teachers assumed a role less committed to actively teaching due to their feelings of incompetence to adequately teach the content of some subject disciplines coupled with fear of invading the general education teachers' territory (Phillips & Sapona, 1995; Scruggs et al., 2007). Generally, each co-teaching team determines which approach works best for them based on the lesson, students' abilities, and assigned roles and responsibilities of each co-teacher.

Roles and Responsibilities of Co-teachers

Whether assigned or assumed, roles and responsibilities of both general and special educators seemed to be a strong indicator of successful partnerships. Interestingly, questions remain regarding the actual roles each co-teacher should perform and who should make and assign specific roles for each co-teacher. Studies in this area were predominantly qualitative in nature and mostly described the various roles carried out by co-teachers. For example, Rice and

Zigmond (2000) discussed how special education teachers reported that they felt as though they were invading the general education classrooms and thus assumed dormant and subordinate roles. This role-taking involved assisting with clerical duties, managing challenging behaviors, and differentiating instruction among other roles appointed by the general education teacher. Other special educators also expressed that they often relinquished their professional authority and took on assistant roles to be a team player in this partnership.

Numerous studies in the co-teaching literature demonstrated that joint planning forms the essence of disseminating and carrying out classroom roles. In a meta-synthesis of co-teaching, research by Scruggs, Mastropieri, and McDuffie (2007) demonstrated that the most predominant co-teaching model used in elementary and secondary classrooms is *one teach, one assist*. This model frequently places the special educator in the assistant role and the general educator in the instructor role. Weiss and Brigham (2000) reviewed 23 studies and showed that the most prominent role performed by special education teachers was making modifications to instructions and tracking students' progress, while the general educator assumed the dominant role of the curriculum expert. Without agreed roles and responsibilities in this two-person venture, there may be barriers to effective co-teaching. Furthermore, the very premise on which co-teaching was built encouraged teachers to merge their professional strengths to work as one efficient team (Bauwens et al., 1989). Evidently, this proved to be easier said in theory than carried out in practice.

As a result, Scruggs et al. (2007) advised co-teachers to identify each other's strengths and weaknesses. Utilizing each member's strengths promotes better results for both teachers and students. The main criticism highlighted in some studies was that special education teachers do not have adequate content knowledge to teach subject disciplines. In a similar inquiry, Keefe and

Moore (2004) presented a case which showed that general education teachers also revealed that they did not think special education teachers could transition beyond the roles of supervising students' work or assisting with challenging behaviors. In the same study, special education teachers expressed that they lacked confidence to deliver the content. Some also felt micro-managed and that they received little or no opportunity to play instructional roles in their respective classrooms. Although no studies were conducted at the pre-K level, those studies conducted among elementary and secondary levels co-teachers all shared similar findings. Overall, most special education teachers played limited roles in co-teaching classrooms, often due to their misperceptions or their fear of invading another teacher's turf. Morocco and Aguilar (2002) documented the feelings of reticence experienced by many special education teachers and noted that they needed to create their own opportunities to showcase their skills to establish equity in co-taught classrooms. As a result, co-teachers should focus on building and maintaining positive relationships and ultimately successful co-teaching experiences. By doing this, both teachers should be aware of critical components that will foster this positive venture.

Necessary Components for Effective Co-Teaching

Simply implementing co-teaching in a classroom with a pair of certified general and special education teachers is far from meeting the requirements for successful co-teaching. Therefore, to provide equity and understanding in this instructional model, it is necessary to explain several factors that might promote effective co-teaching. The literature on factors that support co-teaching demonstrated that teacher preparation programs, professional learning, and school-based support have the most impact on successful co-taught classrooms (Brownwell et al., 2006; Carter et al., 2009; Paulsen, 2008; Scruggs, et al., 2007).

Teacher Preparation for Collaborative Teaching

Many teacher preparation programs have not adequately prepared pre-service teachers to collaborate and participate in co-teaching. Therefore, many teachers often feel unprepared and only reluctantly accept co-teaching assignments (Paulsen, 2008). However, they often still play roles in their respective co-taught classrooms that are inconsistent with the co-teaching model. Friend et al. (2010) indicated that this might be due to the traditional classrooms in which they were taught as students, coupled with how their teacher training courses prepared them to teach. Hence, many teachers are unaware of how to adequately practice the collaborative roles expected in today's co-taught classrooms. In their defense, Friend et al. (2010) emphasized that "it is not reasonable to expect teachers to understand and implement [co-teaching] without specific instruction in the pertinent knowledge and skills" (p. 20). Due to this problem associated with co-teaching, many pre-service teachers enter co-taught classrooms and succumb to the daily frustrations of implementing an instructional model that they barely understand. Therefore, it is argued that co-teachers should receive opportunities for on-going professional learning to maximize the potential of co-teaching classrooms (Scruggs, et al., 2007).

Professional Learning Opportunities

Several researchers (Magiera & Zigmond, 2005; Scruggs et al., 2007; Weiss & Lloyd, 2002) discovered that a lack or a limited number of opportunities in teacher training programs negatively impacts general education and special education teachers who work with academically diverse learners. Therefore, school personnel should seriously consider providing on-going professional learning for teachers to improve their instructional delivery to teach students in co-teaching settings effectively. Research findings also showed that co-teachers who receive continuous professional learning improved their teaching skills, particularly among

meeting the needs of students with disabilities (Friend, et al., 2010; Idol, 2006; Vaughn, et al., 1998). Scheeler et al. (2010) also highlighted positive results among both general education and special education co-teachers who received in-service training throughout their first year as co-teachers.

A quasi-experimental study conducted by Boudah et al. (1997) reported that after teachers participated in workshops on ways to share responsibilities and use different co-teaching approaches based on the need of their students and their preferences, they were better able to plan and teach their students. Therefore, professional learning that aims to address the specific needs of co-teachers is important to improve the overall effectiveness of this teaching model. Murray (2004), taking a different approach, provided in-service training only for general education teachers to help them embrace co-teaching. The results indicated that while this training addressed challenges expressed by general education teachers about their individual desires and preconceptions concerning the collaborative partnership, the study had a few limitations. One limitation was that it would have been more beneficial if special education teachers were also included in the training to get their perspectives. Therefore, one of their suggested implications was for school administrators to provide both pre and post training to direct efforts to include both teachers and offer ways to improve effective communication between co-teachers

Effective communication skills. Several studies (Carter, et al., 2009; Damore & Murray, 2009; Gately & Gately, 2001; McDuffie, et al., 2009; Ploessl et al., 2010) revealed that many problems faced by co-teachers could be solved by improving their communication skills. Other research (Friend & Cook, 2010; Kohler-Evans, 2006; Paulsen, 2008) suggested that specific communication skills like listening, dependability, flexibility, cooperation, responsiveness, and

patience, are critical in collaborative partnerships to impact student learning. A correlation study conducted by Damore and Murray (2009) among 118 general education and special education teachers from 20 elementary schools in Chicago found that communication skills were the highest predictor of successful collaboration. Administrators cannot assume that all teachers come into co-teaching possessing effective communication skills. Friend (2000) maintained that effective communication skills must be taught and nurtured. Although not every teacher has effective communication skills to begin with, Gately and Gately (2001) advised that teacher training programs and in-service courses should provide opportunities for co-teachers to address this important skill set.

As a result, co-teachers should be open to conducting on-going self-examinations of their temperaments, strengths, and prerequisites to improve daily communication with each other. Actively communicating with each other and supporting each other is the first step towards building trust for successful collaboration. Trust is built and maintained when teachers establish and foster good relationships with each other (Connoly & James, 2006). Developing these relationships and nurturing rapport by showing "unconditional positive regard for one another" (Gilley et al., 2009, p. 23) will make forming functioning partnerships to establish successful co-teaching much easier. This school-wide model should also be a goal supported by school administrators.

School-Based Supports that Facilitate Collaborative Teaching

Administrative support plays a key role in fostering and maintaining successful co-teaching classrooms (Causton-Theoharis & Theoharis, 2009). Therefore, effective leadership is a critical component of long-term reforms. Administrators should create opportunities for general education and special education co-teachers to receive the needed support to participate

effectively in co-teaching (Damore & Murray, 2009; Kritikos & Birnbaum, 2003; Leatherman, 2009; Phillip & Sapona, 1995; Santoli et al., 2008; Scruggs et al., 2007). School administrators should understand the components that enhance co-teaching so they can plan and implement support systems effectively. As a result, administrative support is an on-going process of first helping teachers to understand their roles and responsibilities, and then to support on-going coaching and mentoring on issues raised by co-teachers (Friend et al., 2010). To create lasting positive effects through co-teaching, administrators should also establish a school climate that encourages trust and cooperation among teachers.

A mixed-methods research study carried out by Idol (2006) involving eight secondary school principals and co-teachers illustrated how administrative support was crucial to maintaining a successful co-teaching classroom. Moreover, administrators stated that while they would not force collaborative practices among teachers who are not interested, they would also provide the necessary training and support needed to foster collaborative work. Although this study had a relatively small sample size, it demonstrated the critical role that administrative support plays in the overall success of the co-teaching model.

Benefits of Co-Teaching

The benefits of co-teaching are frequently professed. This instructional model is often seen as one of the most appropriate ways to encourage and promote positive social and academic outcomes for all students, but specifically benefitting students with varying disabilities. There are also benefits experienced by both general and special education teachers who participate in co-teaching.

Student Benefits

Despite the mixed results presented in the literature regarding the improvement in students' overall academic performances (Boudah et al., 1997; Volonino & Zigmond, 2007), other studies highlighted outstanding performances in specific subject disciplines (Eisenman et al., 2011; Idol, 2006; Murawski & Swanson, 2001; Santoli et al., 2008), which indicated that there are potentially large benefits for students who are taught in those settings. Mixed-methods research conducted by Austin (2001), on co-teaching effectiveness among students, identified improvement in self-confidence and fostering positive relationships with peers when students with disabilities were taught in co-teaching classrooms compared to their counterparts who were taught in self-contained classrooms.

Although evidence to support this claim is inconclusive and small in scale, a study conducted by Fontana (2005) revealed that co-teaching helped foster and improve social and emotional development among the students with disabilities. Similarly, program evaluation research on team teaching in an elementary school indicated that this type of teacher collaboration brought about an increase in self-confidence and self-regulation skills for students with disabilities (Hunt et al., 2001). The authors also suggested that social and emotional growth in students may also have contributed to a moderate increase in students' academic gains. Moreover, their findings revealed that co-teaching classrooms provide a greater opportunity for students with disabilities to learn pre-requisite skills needed to build and sustain friendships with other students. These students would not be afforded those opportunities if they were taught exclusively in self-contained classrooms.

In addition, co-teachers reported that students displayed more positive attitudes, demonstrated appropriate behaviors, and pursued lasting friendships with peers without IEPs

(Estell et al., 2009; Hang & Rabren, 2009). Despite the diverse needs and abilities of students in co-teaching classrooms, the combined expertise of both teachers seems to have a positive effect on students' holistic growth and development. Other studies have shown similar results that there are also benefits for students without disabilities such as cooperative learning skills, tolerance, and acceptance of others, among other social skills (Austin, 2001; Eisenman et al., 2001; Scruggs, et al., 2007). Perhaps this high level of cooperation and social capital depicted by students in these co-taught classrooms was as a result of seeing this being modeled by their co-teachers (Gately & Gately, 2001; Stevenson, et al., 2005).

Co-teaching was also dubbed as the key component to improving academic outcomes for students with disabilities. In a collaborative environment, having two professional supporting staff members and peers with diverse abilities creates opportunities to optimize teaching and learning opportunities. Studies conducted in co-taught settings (Demos & Foshay, 2009; Smutny & Friend, 2010) argued that these learning environments provided numerous supports for all learners through differentiated instructions, which have ripple effects to improve teaching and learning outcomes for this unique group of students. Therefore, unlike traditional classrooms, where a single teacher plans, teaches, and assesses every student, co-teaching encourages two teachers to carefully modify and tailor curriculum and instructions according to students' interests, abilities, and needs.

A study done of 23 co-teaching teams highlighted that low-achieving students improved significantly in academic skills when taught among their typical peers without disabilities, when compared to students being taught solely in traditional self-contained classrooms (Walther-Thomas, 1997). Being able to provide more one-on-one support, coupled with both teachers' professional expertise, was also reported as an additional advantage with this instructional

model. Walther-Thomas also stated that both special and general educators expressed that they were able to implement high-quality instruction due to the low teacher-to-student ratio and credited the co-teaching partnership for affording those opportunities. In fact, teachers attributed their success to increases in their self-efficacy skills and professional satisfaction gained by working closely with their colleagues (Salanova et al., 2011). The stigma associated with students with disabilities that previously led to segregation within school settings was reduced with the increase of co-teaching classrooms and disability awareness (Pugach & Wesson, 1995). Despite a number of small effects size reported about co-teaching, (e.g., Boudah et al., 1997; Volonia & Zigmond, 2007) to date no research shows that co-teaching has a negative impact on students with or without disabilities or that it is an ineffective instructional model.

Teacher Benefits

Overall, the co-teaching literature revealed that both special and general education co-teachers benefit from participating in this collaborative venture (Dufour, 2004 & Scruggs et al., 2007) and learn from each other (Brownwell et al., 2006; Glazier, 2004; Kritikos & Birnbaum, 2003; Murawski & Hughes, 2009; Van Garderen et al., 2007; Wasburn-Moses & Frager, 2009). In order to create positive changes to improve academic outcomes among diverse student populations, teachers should embark on their collective efforts to improve instructional practices. Undoubtedly, teachers meet with opportunities to broaden their expertise each time they participate in collaborative initiatives and co-teaching affords this continuous platform. Hunt et al. (2001) showed that teachers who set scheduled times to meet and plan instructional activities with one another usually have a higher increase in student performances. Therefore, the benefits gained from prolonged engagement in collaborations like co-teaching afford teachers the opportunity to learn from each other by watching each other teach and interact with students. In

addition, having daily interactions affords both teachers a chance to talk through problems they faced and may further help them to gain confidence in their abilities to meet the needs of the diverse learning styles, broaden their instructional strategies, and develop new skills (Austin, 2001; Hunt et al., 2001; Kohler-Evans, 2006).

A mixed-methods research study done by Scheeler et al. (2010) among six co-teachers (three general education teachers and three special education teachers) emphasized the immediate benefits gained from co-teachers who provide feedback to their counterparts. The co-teachers were trained to use Bug-In-Ear technology to provide immediate corrective feedback to their co-teaching partner while engaged in the *one teach, one assist* approach of co-teaching. Each co-teacher switched roles during the lesson so they could both experience being a coach and an instructor. All six co-teachers conveyed that they learned a lot and could easily make changes during instructions from the immediate feedback provided by their respective teammates. Continuous practice in similar intentional collaborations has the opportunity to broaden the scope and implications of co-teaching and learning. School reform activist Dufour (2004) shared similar sentiments about collaborative practices such as co-teaching and proposed that professional learning communities should embark on this opportunity and pave the way toward restructuring instructional practice.

Murawski and Swanson (2001) conducted a meta-analysis on research carried out in co-teaching over a ten-year period, which included 1,600 students and 45 co-teachers, to measure the extent to which co-teaching instruction was effective. These researchers found out that co-teaching was moderately significant based on the effect sizes of studies they analyzed in their research. The results also showed that co-teaching outcomes vary and usually rely on the type of classrooms in which co-teaching is implemented (for example, grade, severity and types of

disabilities). Wilson and Blednick (2011) supported Murawski and Swanson's findings and noted that more research should be conducted in a variety of co-teaching settings to ascertain its impact and to provide useful feedback to strengthen this instructional model. Additionally, they asserted that co-teaching does offer both professionals the opportunity to solve problems collaboratively and support their students' diverse learning needs. They reinforced the importance of both co-teachers performing equitable roles based on their skill sets. Despite the numerous benefits afforded by this relatively new instructional model there were also challenges experienced by both teachers.

Challenges in Co-Teaching

As with most opportunities for growth, there are challenges to overcome. The NCLB (2001) and IDEA (2004) reforms mandated the education sector to acknowledge the lack of access and equity in schools to provide equal educational opportunities for students with disabilities. NCLB proposed the implementation of co-teaching as an instructional model to increase access and accountability for students with disabilities, although there was and still is not enough information in the co-teaching literature about how to implement this teaching model. In other words, NCLB did not provide a blueprint for the successful implementation and practice of co-teaching. This lack of foundational plan adds to the discrepancies many educators faced in their attempts to implement co-teaching successfully. These inconsistencies also led to further compromises to the potential of this instructional model (Kloo & Zigmond, 2008; Volonino, 2009). The literature shows that lack of shared planning time, philosophical differences, and standardized assessments are all major issues that affect the successful long-term prospects of co-taught classrooms.

Lack of Shared Planning Time

Lack of shared planning time is a hindrance to meaningful co-teaching experiences. This challenge, which both teachers and administrators experience has been discussed and researched in a host of studies. Since scheduling joint planning is the first rung on the ladder towards forming successful co-teaching partnerships (Helwick-Jackson, 2007; Keefe, Moore, & Duffie, 2004; Murawski, 2006; Nierengarten, 2007), teachers who neglect this component usually experience even more challenges in co-taught classrooms. A single case study done in a middle school co-teaching classroom revealed that co-teachers who are not given the opportunity during the regular school day to plan together experience challenges in their instructional quality and delivery (Bouck, 2007). Therefore, a lack of collaborative planning also affects their students' academic growth. A quantitative causal comparative study done by Magiera and Zigmond (2005) also found that teachers who have little or no planning time show a minimal increase in the performances of their students with disabilities as opposed to co-teachers who have sufficient time to plan lessons. Since set planning time seems to be a critical component necessary for the successful implementation of co-teaching, there should be more effort by administrators to resolve this issue. Other researchers (e.g., Bouck, 2007; Carter et al., 2009; Kritikos & Birnbaum, 2003; Magiera & Zigmond, 2005; Van Garderen & Whittaker, 2007) found that teachers are often too overwhelmed with routine tasks and obligations during the school day to find common time for planning with their co-partners.

A correlational study done among 56 co-teachers and administrators in a middle school found that a significant relationship exists between their beliefs about inclusion and their current experiences as co-teachers (Santoli et al., 2008). They found that the main concern of respondents was the difficulty scheduling time for collaborative planning, and this difficulty

affected their beliefs about the potential of co-teaching. Furthermore, the general educators complained that special educators were always busy attending IEP meetings and offering one-to-one support to students with disabilities, which negatively impacted their efforts to schedule and attend planned meetings. It is important to note that this particular research was conducted among co-teachers after their first year as co-teachers, and so findings may be affected by other issues they had to deal with as first-year teachers. Other research conducted with both experienced and novice co-teachers highlighted the persistent pitfall of lack of scheduled planning time as a major obstacle experienced by many co-teachers (Murray, 2004). Another concern that impacts successful co-teaching classrooms is co-teachers with different philosophical viewpoints on teaching and learning.

Philosophical Differences

Undoubtedly, teachers do better in collaboration endeavors when they share a similar educational philosophy (Brownell, et al., 2006; Leatherman, 2009; Scruggs et al., 2007; Timmons, 2006). Having shared beliefs about how to teach, what to teach, and how students learn can help co-teachers form a fundamental bond that assists in developing and maintaining successful partnerships. Capizzi and Barton-Arwood (2009) acknowledged sharing the same perspectives allows teachers to establish equal roles, set mutual goals, and equitably share responsibilities. While sharing educational philosophy is not always possible, research by Robinson and Buly (2007) indicated that teachers do not always have to share the same beliefs about teaching and learning. However, it is important that teachers who do not share the same beliefs about teaching and learning should respect each other's perspectives and have students' learning as their number one goal.

Van Garderen et al. (2009) pointed out a major difference between special education and general education teachers regarding their differences in epistemological beliefs. The authors noted that special education teachers operate with a more behaviorist perspective, while general education teachers tend to follow a constructivist approach to teaching and learning. Based on this philosophical difference, both teachers may experience challenges in co-teaching implementation. Therefore, co-teaching is more worthwhile when teachers look beyond perceptions, assumptions, and other differences and allow open communication and professional conduct to resolve disagreements (McDuffie et al., 2009; Volonio, 2007). In many cases, planning and instructions were regulated by the general educator while the special educator assumed the role of managing behavior and in some cases, as teacher assistance. This type of implementation according to Scruggs et al. (2007) resembled a traditional general education classroom and was contrary to a co-teaching philosophy. Subsequent research studies appealed for more inquiry into instructional strategies and role classifications appropriate for co-teaching classrooms.

Most importantly, studies show that when the entire school has a shared philosophy and focus on each student's needs (Rugotska, 2005; Santoli et al., 2008), co-teaching becomes a communal goal. Rugotska (2005) conducted a case study in Wisconsin with one special education and three general education teachers with different ideologies and found that they experienced more challenges when they did not openly discuss these differences. Similarly, Hawkins' (2007) longitudinal study highlighted that a key component of forming co-teaching classrooms was the prevailing philosophy of the school as a whole. In Hawkins' study, administrators at all 60 of the studied schools in Rhode Island sought to close the achievement gap between students with disabilities and students without disabilities. Although this study in

particular did not present detailed statistical data to support its claims, based on the large sample size, the findings reported how a common educational philosophy encourages collaboration. Therefore, despite diverse viewpoints held among teachers in co-taught classrooms, schools should join forces for the sake of their students to promote positive co-teaching experiences. Having a difference in philosophical ideology usually affect each teacher's teaching styles and instructional practices.

Differences in teaching styles. Traditionally, teachers are trained to work independently in their classrooms. Co-teaching as an instructional model is quite the opposite of this entrenched tradition. Co-teaching constantly involves solving problems, and so when both teachers have different approaches to teach their students and how students learn they experience conflicts. This difference in approach and potential for conflict invariably poses a challenge to achieving successful co-teaching experiences. According to Friend and Cook (2010), differences in teaching styles and other opinions will take a toll on the working relations in co-taught classrooms. Washburn-Mosses and Frager (2009) demonstrated that a co-teacher with different teaching style could negatively affect his/her partner's ability to work together in order to achieve learning goals. However, other researchers such as Rugotska (2005) disagreed and contended that having different teaching styles or utilizing different teaching strategies can be an advantage of co-teaching classrooms when executed properly. Whereas co-teachers' differences in teaching styles may pose as an initial professional hurdle towards successful collaboration, these challenges may pose lasting problems like interpersonal difference between co-teaching pairs.

Interpersonal differences. Teachers bring their experiences, cultural backgrounds, and gender ideologies to any collaborative venture. Co-teaching in the pre-K setting can be

overwhelming after spending eight hours daily in the same classroom. The necessity of multitasking among a multiplicity of other things can also add to the conflicts between both teachers. Although research on interpersonal differences among co-teachers is relatively sparse, other studies on interpersonal differences shows that they can cause disconnects in communication and interactions between both the general and special education teachers (Cramer & Stivers, 2007; Gilley et al., 2010). Unfortunately, differences in communication style and personality may impede interpersonal interaction. Stevenson et al. (2005) contended that interpersonal differences show that they affect both teachers' ability to trust each other. Trust was pointed out as a critical factor in successful co-teaching. Therefore, taking time out during the initial stages for both teachers to get to know each other's personalities is a proposed recommendation. Co-teachers who make attempts to understand their partner's tendencies will minimize the interpersonal problems and resolve conflicts as they arise.

Conflict resolution. Conflicts are inevitable in most relationships and are usually a result of personality differences and mis-communications (Conderman, 2011). Teachers are not immune to the possibility of conflict in a co-teaching relationship. Additional conflicts may also result from the co-teachers' approaches to resolving issues which may ultimately cause further conflicts. Although conflicts may be perceived as a negative feature that inhibits successful co-teaching, Conderman (2011) stated that conflict is not necessarily a bad thing. Conflicts that arise throughout co-teaching can in fact create opportunities to think, reflect, and learn about each other to improve collaborative outcomes. However, in order for this to occur, both teachers in co-teaching classrooms should learn and engage in effective conflict resolution strategies to address problems as they arise (Behfar, Peterson, Mannix, & Trochim, 2011).

Personality Differences

Co-teachers' personalities were also widely mentioned in the co-teaching literature as a barrier that infringed on authentic co-teaching experiences. Within the last ten years, some emerging studies highlighted the complexities of implementing co-teaching due to interpersonal dynamics (Baker, 2006; Barth, 2006; Flessner, 2007; Kohler-Evans, 2006; Rice & Zigmond, 2000). Compatibility is difficult to achieve when assigning co-teaching teams. Baker (2006) and Helwick-Jackson (2007) revealed that the lack of or limited administrative support might affect meaningful and sustained co-teaching efforts. On-going professional and administrative support is warranted even for the most qualified teacher. Another challenge that affects successful co-teaching is standardized assessments.

Standardized Assessments

IDEA (2004) distinctly emphasized that co-teaching classrooms should provide opportunities for students with disabilities to gain access and equity to the general curriculum and assessments. However, standardized testing is perceived by co-teachers as the culprit robbing students of their instructional time. Research indicated that it is difficult to negotiate between the conflicting sides of providing testing opportunities for all students and avoiding the harsh consequences that accompany high-stakes testing (Harkins, 2007; Mastropieri, et al. 2005). Students with disabilities were becoming frustrated under frequent pressures for testing, which posed complications for their achievement. However, further research is needed to clarify the specific impact of testing in co-teaching classrooms. Unfortunately, these identified reasons might influence co-teachers to perceive co-teaching in a negative light (Hang & Rabren, 2009; Naraian, 2010). For example, Pugach and Winn (2011) emphasized that despite numerous benefits offered by co-teaching, both novice and expert teachers could be affected by the

challenges perceived or experienced, which may significantly influence their abilities to perform effectively in co-taught classrooms.

Perceptions of Co-Teaching

As much as educators and policy makers would like to believe that teacher perception has very little influence on successful teaching and learning, in reality this is a myth. Empirical evidence supports the claim that a co-teaching model is an effective approach for providing instructions to students with disabilities yet disparities in co-teachers' beliefs and ideas held about co-teaching may influence how they progress in this collaborative experience (Austin, 2001; Damore, & Murray, 2009; Hamilton-Jones & Vail, 2013; Hunter-Johnson, Newton, & Cambridge-Johnson, 2014). Therefore, the question becomes: How should special education and general education co-teachers carefully navigate this task while working through issues of opposing beliefs about co-teaching? As Bandura (1997) pointed out, an individual's beliefs and perceptions tend to incorporate all their experiences. In a similar manner, Cochran (1997) emphasized that teachers entering co-teaching settings bring with them preconceived notions, ideas, and attitudes which invariably affect the extent to which their roles are carried out. These ideologies are shaped by numerous beliefs and experiences that form the blueprint of an individual's daily practice –from interpersonal relationships with co-partners to the instructional roles played or assumed.

Cochran developed a psychometric instrument used to measure teachers' attitudes toward students with disabilities in inclusive settings. *The Scale of Teachers' Attitude Towards Inclusive Classrooms* (Cochran, 1997, revised 2000) specifically examined the effects of teachers' attitude towards disabilities and helped remediate specific dimensions of teachers' beliefs toward inclusive practices. This measure is still widely used and helps teachers identify biases they hold

about inclusive settings. While it would not be appropriate for use in this study since the primary focus is on co-teachers' perceptions of co-teaching and not their attitudes toward students with disabilities, it is still useful to understand which factors influence successful co-teaching environments.

Several findings indicated that teachers were governed not by the logistics of co-teaching but by their own attitudes and perceptions (Cook, 2001*;* Cook, Semmel, & Gerber, 1999; Cook, B.G., Tankersley, Cook, L., & Landrum, 2000; Praisner, 2003). Teacher perceptions are varied, and while some may be regarding teaching students with disabilities, other perceptions are about sharing a classroom with another professional. Based on the literature surveyed, it was challenging to navigate or offer a one-size-fits-all solution to this problem.

In exploring the extent to which teachers' perceptions influence their co-teaching experiences, Avramidis and Norwich (2002) compiled a literature review of research studies done on co-teaching to highlight factors that affect negative and positive perceptions of co-teaching. Collectively, they found those teachers who have personal experiences with individuals with disabilities showed positive attitudes toward co-teaching, while, teachers with little or no experience showed negative attitudes towards co-teaching initiatives.

Other studies (Hunter-Johnson, Newton, & Cambridge-Johnson, 2014; Hwang & Evans, 2011) showed that some teachers' reluctance or negative perceptions were due to lack of training in working with diverse groups of students. These factors, among others, tend to influence teachers' perceptions and limit their full engagement in co-teaching. For example, Hwang and Evans' mixed-methods research among teachers in South Korea showed that 55% of teachers expressed that they were unwilling to participate or volunteer to work in co-teaching classrooms due to their professed inability to provide instructional strategies to meet the needs of students.

Given the implications associated with negative perceptions and how this may impact the quality of instruction, some researchers highlight “quick fix” supports such as professional development and mentoring to improve the efficiency of this teaching model.

According to Kilanowski-Press, Foote, and Rinaldo (2010), one of the biggest barriers towards the successful implementation of co-teaching classrooms is teachers’ lack of understanding of what co-teaching entails. To foster more positive perceptions of co-teaching, Scruggs, Mastropieri, and McDuffie (2007) offered recommendations such as infusing teacher preparation programs with coursework and practice opportunities to facilitate pre-service teachers with the needed theory and rationale for this type of instructional technique. This may be the first step toward re-shifting co-teachers’ misperceptions to support their conceptual understanding and provide opportunities to see demonstrations of successful co-teaching in practice.

Research carried out by Austin (2001) used a co-teacher perception survey and semi-structured interviews among 92 general and special education co-teachers who taught kindergarten through twelfth grades to examine co-teacher perceptions of co-teaching. His study revealed that over 50% of teachers believed that co-teaching contributed to their positive teaching experiences and their students’ academic growth. Additional findings supported prior literature (Pugach & Wesson, 1995) in which teachers reported positive perceptions of co-teaching due to its potential to break down social barriers and promote acceptance among students with disabilities.

As important as teachers’ perceptions are about co-teaching, it was also critical to evaluate how students who are taught in co-teaching classrooms perceive this instructional model. Several studies highlighted that some students in middle and high schools indicated their

preferences to be taught in co-taught classrooms as opposed to traditional classrooms. For example, Wilson and Michael's (2006) mixed methods study made a strong case for co-teaching classrooms based on their finding which indicated that over 300 students chose to be taught in co-teaching classrooms. These students were identified as both students with and without IEPs. The survey from the quantitative portion of the study showed that all 127 students with disabilities expressed that they were able to get more support from teachers and peers in co-taught classrooms. It is believed that these students' positive perceptions of co-teaching may have been the principal component in improving their learning opportunities. Overall, since co-teacher perceptions have a significant effect on the quality of co-teaching classrooms, then this should be an essential element incorporated at all levels of schooling. Thus far, emerging literature on co-teachers' perceptions of co-teaching focuses predominantly on upper elementary, middle, and high school co-taught classrooms; no studies were found that explored co-teachers' perceptions co-teaching in pre-K settings.

Co-teaching in Pre-K Classrooms

Although the growth of co-teaching classrooms is widespread, no research focused on co-taught classrooms among the pre-K population. While this is surprising, it also reflects the realities that exist among this group of students who are not adequately represented in the co-teaching literature. Most research carried out is done in elementary and secondary settings. Several studies (Deiker & Murawski, 2003; Keefe & Moore, 2004; Zigmond, 2004) have concluded that the special and general education co-teachers seemed to have a high self-efficacy in co-teaching which propels them to perform most of the instructional roles in their classrooms. Therefore, research can identify the critical role of self-efficacy and the influence it has on co-teachers' perceptions, and ultimately this might lead policy makers to take the necessary steps

to improve the full potential of co-teaching in pre-K classrooms. These findings also have some significant implications for the early childhood student population.

Self-Efficacy and Co-Teaching

Co-teaching is still in its infancy as an instructional model, and so emerging insights gathered from studies conducted have highlighted different constructs that can influence co-taught classrooms. One such factor is teachers' self-efficacy beliefs about co-teaching. Self-efficacy, described by Bandura (1997), refers to the ability of individuals to conceive and perform tasks required to attain a specific goal. Research conducted by Goddard, Hoy, & Woolfolk Hoy (2000) highlighted that self-efficacy in education is a critical component and can be applied to co-teaching, since teacher optimism or pessimism can influence the goals teachers set for themselves and their perceived efforts in performing the task of co-teaching.

With the steady annual increase of co-teaching classrooms, many would get the impression that co-teachers play their respective roles while experiencing minimal challenges. Despite that impression, research indicated that even with the best teachers, effective co-teaching does not happen naturally (Plossel, Rock, Schoenfled, & Blanks, 2010). Recent research by Zakeri, Rahmany, and Labone (2016) indicated the influence of self-efficacy on quality teaching and learning. The authors conducted a mixed-methods study to investigate novice English language teachers' self-efficacy skills in their first-year experience. The finding showed that all 55 novice teachers supported Bandura's (1997) proposition that fostering teachers' interdependency is the best means for achieving organizational outcomes. Moreover, teachers' actions in their classrooms are informed by their self-efficacy beliefs. Implications from this research can be used to inform co-teachers' self-efficacy beliefs and how they influence their

perceptions of co-teaching. Overall, self-efficacy matters, not only as a psychological construct but because it has a close link to quality collaborative practices.

Moreover, Salanova et al. (2011) argued that in order to improve teaching engagement, teachers have to have high self-efficacy of their pedagogical abilities. Another noteworthy point made by those authors was that although co-teachers with high self-efficacy experience difficulties in their classrooms like all teachers do, they tend to persevere through those difficult times. Applying this understanding to co-teaching contexts can result in more meaningful and long-term experiences by co-teachers that foster perseverance and continuous practice.

Salanova et al. (2011) also went a step further and examined the relationships between teachers' self-efficacy skills and their collective efficacy skills. One of the drawbacks of many educational reforms is that they do not address teachers' self-efficacy skills and their importance in influencing learning outcomes. Ignoring this critical component of teaching and learning can lead to irreparable damages in schools. Educational scholars (e.g., Sarason, 1990; Tschannen-Moran, & Hoy, 2001) have argued that policymakers, researchers, and practitioners should embrace the idea of improving instructional practices and outcomes by infusing self-efficacy beliefs in professional learning endeavors. Teachers who are more efficacious tend to stay longer in challenging positions to work with struggling students than teachers who are considered less efficacious (Tschannen-Moran & Hoy, 2001).

While there is a well-established link between teacher efficacy and individual teacher's performance, only, few a studies have analyzed the effect of collective efficacy on groups of teachers within a school context (Labone, 2004). Tschannen-Moran and Hoy (2001) noted that "teaching is best when performed in a group context" (p.241), and many problems teachers face alone could be resolved when performed with the help of their colleagues. It is understood that

challenges and successes faced by teachers are determined by their high or low perceived self-efficacy beliefs to perform a particular task. Therefore, recognition of the interdependence of co-teachers' perceptions and their self-efficacy beliefs within the co-teaching context is central to the overall success or failure of this instructional model. Thus, using the theoretical concept of self-efficacy to guide the thinking and apply it to co-teachers' perceptions are critical to this study.

Theoretical Framework: Social Cognitive Theory

How co-teachers think of themselves playing the role of co-teacher will directly impact how well they performs the roles associated with this goal. In other words, co-teachers who think they are good team players and envision co-teaching as a meaningful model to teach students with disabilities will enter co-teaching classrooms with that view in mind and ultimately work towards achieving this task. Unfortunately, the opposite is also true. The current study is rooted in Bandura's *Social Cognitive Theory*, which demonstrates sources of efficacy beliefs and the implications for how well co-teachers 'perform their roles. Self-efficacy is defined as beliefs in one's capabilities or skills; in other words, what the person believes s/he is capable of accomplishing under certain circumstances (Bandura, 1997). According to Bandura, individuals develop general expectations and beliefs about different activities based on experiences (personal or vicarious), and these perceptions turn out to be strong predictors of their accomplishments or failures.

Self-efficacy therefore becomes the catalyst for influencing both special and general education teachers to embrace the co-teaching journey and is attached to every task they perform within the co-teaching context. Utilizing the principles laid out in the self-efficacy premise to inform this study can highlight aspects of special education and general education teachers'

practices to make the guided analysis and interpretations needed to fully understand how their beliefs influence their co-teaching roles. Furthermore, using the lens of this theory can help provide insights on how to improve students' performances by providing more understanding about how teachers feel, think, and act in the co-teaching context.

Co-teachers who are confident and motivated to perform their jobs usually perform related roles very well. Since self-efficacy beliefs are highly predictable human behavior, it is important to draw inferences from this construct to understand the phenomenon being studied. Bandura (1986) asserted that individuals have a self-system that enables them to exert control over their thoughts and actions. This innate capacity also allows individuals to perceive, regulate, and evaluate behaviors to effect subsequent changes to one's environment. Succinctly put, co-teachers' perceptions of an instructional model can determine how they carry out the tasks of the model. Knowing this can be instructive to understand how teachers perform in certain situations. Bandura (1997) also contended that individuals continually create and re-create perceived competency of self which becomes the base (one's self-efficacy) for goal attainment.

Special and general education teachers who approach the co-teaching model with high expectations and high self-efficacy might enter the co-teaching partnership with similar beliefs, which may in turn influence them to persevere during challenging times and work unrelentingly to achieve set goals (Pajares, 1996a, 1996b). Interestingly, self-efficacy is not easily evaluated, since this construct is based on an individual's interpretation of their skill set and ability to perform a task. While self-efficacy ascertains how an individual assesses his/her ability to perform a task, collective efficacy evaluates the whole.

Collective Efficacy

In everyday life, people do not function in isolation from each other. Even the most self-proclaimed independent individuals rely on others to help fulfill set goals. Bandura described collective efficacy as a shared belief held among people that they can utilize their collective power to produce a desired result. This philosophy can be applied to a school setting and more specifically to the co-teaching model, where it can be used to describe the belief among co-teachers that they (collectively) can plan, teach, and assess, among other roles required to successfully carry out co-teaching (Goddard, Hoy, & Hoy, 2004). Unlike self-efficacy, collective efficacy is based on the overall attribute of a group's efficacy beliefs as opposed to an individual's efficacy. While collective efficacy in a broad sense is related to groups of people working to achieve a shared goal of the group, collective efficacy in education is defined by Tschannen-Moran and Barr (2004) as the collective beliefs by teachers of a given school in their ability to improve their students' achievement regardless of influences from home environment, perceived student abilities, and socio-economic status. Tschannen-Moran and Barr (2000) demonstrated that perceptions and beliefs of teachers in a school help determine levels of student achievement. The significance of teacher perceptions was also reiterated in their 2004 study, in which they found that the ways teachers feel, act, and think stimulated their instructional abilities. These studies help situate the critical role of collective efficacy and how perceptions can influence or hinder the overall goal of co-teaching if both general and special education teachers do not share similar perceptions.

Efficacy beliefs demonstrated collectively through group collaborations have the tendency to improve individuals' feelings of well-being and motivate them to believe they can accomplish together as a team (Bandura, 2000). Therefore, as it applies to this research,

co-teachers who share positive collective efficacy will improve not only instructional but also student achievement. Bandura (1993) also emphasized that high teacher efficacy in a school setting can be utilized to improve academic outcomes for diverse groups of students. Additionally, he noted that students who are taught by teachers with high efficacy usually performed well on standardized tests when compared to students who were not taught with teachers who exhibited those beliefs. According to Bandura, the effect of perceived collective efficacy on academic achievement is a much stronger link than that between socio-economic status and academic achievement. More recent research conducted by Goddard et al. (2000) showed that collective efficacy beliefs have stronger effects on student achievement than gender, student abilities, socio-economic status, or students' prior achievement.

Consequently, collective efficacy is significant in school settings because it affects student achievement, in that higher levels of teacher efficacy result in more effort and persistence among students. Collective efficacy can influence teacher delivery, manage students' behaviors, and inspire and motivate students learning. These efforts exerted by teachers will lead to higher achievement levels among students from diverse groups (Allinder, 1994). Schools that support collective efficacy initiatives can mobilize efforts to improve educational outcomes for students with disabilities or students from poor households. However, Tschannen-Moran and Barr (2004) cautioned that many school cultures are set in their ways and may not be readily accepting of accommodating collaborative efforts such as co-teaching, even when promising changes are imminent. Therefore, it will take significant effort to change the school's philosophy to endorse collective efficacy in order to undertake partnership in teaching and learning.

To achieve this collective partnership goal, school administrators who are committed to improving all students' learning should maximize the efficacy skills from their staff to achieve

this collective goal. Bandura (1997) affirmed that schools function academically and socially concerning the beliefs and perceptions held by the faculty and administrators. Schools that demonstrate high levels of collective efficacy and high student performance share similar characteristics, such as setting high expectations for their students, rigor in the delivery of instruction, and strong and sustained partnerships among teachers. Since teaching staff efficacy is deemed an important factor in improving student achievement, it is necessary to discuss the four sources through which efficacy can be learned. These are through mastery experiences, vicarious experience, verbal and social influences, and physiological and affective states (Bandura, 1997).

Sources of Efficacy Beliefs

Efficacy through mastery experiences can be described as situations in which individuals experienced success and can use those same skills in future endeavors. These experiences are the most authentic and influential sources of efficacy based on one's overall success performing the behavior (Bandura, 1997). These successes help to build in one's mind that one can perform similar tasks quite competently. The second most influential source of efficacy comes from vicarious experiences through models. According to Bandura (1997,) modeling serves as another effective source to promote personal efficacy. In modeling, people compare their potential to perform a task based on the attainment of others who have done it. When individuals observe or visualize others similar to them perform an activity successfully, this experience usually raises their efficacy beliefs regarding their own abilities ability to master that activity, since models can teach them better ways of doing an activity.

The third source of efficacy is verbal and social influence. In this model, according to Bandura (1997), a source of authority (such as a school administrator) can serve to strengthen an

individual's efficacy beliefs by verbally expressing their confidence in one's abilities to perform a task. As an example applied to co-teachers, a school administrator who conveyed to them that she believed they have what it takes to implement a successful co-taught classroom could increase their efficacy beliefs. This source is especially valuable when an individual's efficacies are low, or if the person is experiencing difficulties performing a task. The last and least influential sources of self-efficacy are physiological and affective states, in which people read their physical conditions and capacities —whether through stress, fatigue, illness, etc.—as indicators of their abilities/inabilities to successfully perform goals they have set. Therefore, emotional reactions and perception can activate and influence people's levels of performances. These sources of self-efficacy are associated with performances of behaviors when explained from a social learning perspective. In relation to the educational realm and specifically to the phenomena in this research –co-teachers' perceptions of co-teaching can be understood and described using the principles of this theory. Co-teachers' perceptions of co-teaching will have a direct effect on their efficacy beliefs, which will in turn, have a direct effect on their ability to deliver instruction.

Teacher Efficacy Beliefs

Consistent with S*ocial Cognitive Theory*, the term "teacher efficacy beliefs" grew from Bandura's broad concept of self-efficacy. Bandura (1977) defined teacher efficacy as a teacher's judgment of his or her capabilities to bring about desired outcomes of student engagement and learning, even with students who are unmotivated or challenging to teach. Fletcher (1990) validated Bandura's definition in his study and highlighted that teachers use their insights as a way to judge whether they can function competently in all classroom situations. Research findings by Tschannen-Moran and Woolfolk Hoy (2001) revealed that teachers' perception and

confidence in their abilities to promote student achievement among students with special needs was the hallmark of successful co-teaching. Subsequent research (Berman, McLaughlin, Bass, Pauly, & Zellman, 1977; Guskey & Passaro, 1994; Rotter, 1996; Shaughnessy, 2004) supported the critical role that teacher efficacy plays in meaningful instructional delivery. This is equally true of co-teachers, whose perceptions of themselves can help influence the roles they perform in their respective co-taught classrooms.

Another important construct within the *Social Cognitive Theory* is agency (Bandura, 2006). A property of agency is intentionality. Bandura defined intentionality as the process that occurs when individuals create action plans and strategies for achieving those plans. In essence, collective agency and intentionality occur when there are many structures in place to support the venture, such as people, events, schedules, or expected outcomes. In order for co-teachers to share this collective intention they have to work together to coordinate their actions to successfully realize their goal, which is, in this case, the successful implementation of co-teaching. In this particular research, both general and special education pre-K co-teachers' perceptions of co-teaching will be examined to understand how these perceptions were influenced by their efficacy beliefs. This is a crucial goal to achieve the overall partnership of this instructional model. As Bandura pointed out, factors like teacher perceptions can interfere with teachers' ability to both individually and collectively achieve goals planned.

Summary

Since the legislation of NCLB (2001), schools across the United States have been implementing co-teaching classrooms to fulfill mandated requirements so that students with disabilities can be provided with access to the general education curriculum. Implementing this instructional model is certainly not a seamless transition, and co-teaching is still experiencing

glitches as it continues to redefine roles and responsibilities for both professionals involved. With the learning experiences afforded to researchers and policymakers from the mainstream acceptance of co-teaching, there is certainly room to grow and expand its impact as an instructional model that supports high-quality learning opportunities for all students.

The blending of two professional adults working in one classroom with mixed abilities is by no means a natural pursuit (Friend, 2007). Based on the literature reviewed, networks of supports (organization and administration), common planning time, and clearly defined roles and expectations were evidenced as the necessary components for effective co-teaching experiences (Baker, 2006; Rice & Zigmond 2000). Other contributing variables that fostered successful co-teaching classrooms were teacher perceptions and co-teachers' self-efficacy beliefs in co-teaching. Barth (2006) welcomed the co-teaching initiative and highlighted the influences of collaborative support to impact the academic and social-emotional outcomes for students with disabilities.

Although at times inconsistent and limited in both quantitative and qualitative studies, research on co-teaching demonstrates that it is an appropriate option for most students with disabilities. However, an important indicator to consider in improving the overall effectiveness of co-teaching classrooms is how both general education and special education co-teachers perceive co-teaching. Examining both co-teachers' perceptions may be a key to unlock the potential of this instructional model. By disregarding this tiny yet influential piece of the puzzle, the maximum potential of co-teaching may not be realized. Applying *Social Cognitive Theory* as the primary lens to guide this research might offer new insights into pre-K co-teachers' perceptions of co-teaching.

CHAPTER 3 METHODOLOGY

Overview

The goal of this study was to gain a greater understanding of pre-K special and general co-teachers' perceptions of co-teaching in their current classrooms. Findings from various co-teaching studies indicated that co-teachers' perceptions of co-teaching are critical for the successful implementation of co-teaching (Austin, 2010; Mastropieri et al., 2005; Murawski, 2006). Researchers also stressed that teachers' perceptions are connected to their self-efficacy beliefs (Tschannen-Moran & Woolfolk-Hoy, 2001). This is of particular importance to this research for it helped to determine the specific sources of pre-K co-teachers' efficacy beliefs that might impact their current co-teaching experiences. Therefore, exploring this complex phenomenon may contribute to the larger goal of improving the implementation of the co-teaching model. In this explanatory sequential study, both quantitative and qualitative data were collected from pre-K special education and general education co-teachers in two phases: phase 1, a survey assessment comprised of 27 closed-ended items, followed by phase 2, focus group discussions with groups of the co-teachers. This chapter describes the methodology, which included population and sampling procedures, instrumentation, data analysis, validity/legitimation, researcher's positionality, and limitations of this research. The current research pursued the following questions:

1. How do pre-K co-teachers (both general education and special education co-teachers) perceive co-teaching in their present co-teaching classrooms?
2. What are the similarities and differences in pre-K general education and special education co-teachers' perceptions of co-teaching?

3. What elements of self-efficacy influence pre-K general education and special education co-teachers' perceptions of co-teaching?

Table 2 below represents each research question and the data source used to answer the question.

Table 2

Crosswalk of Research and Data Sources

Research Question	1	2
Question 1: How do pre-K co-teachers (both general and special education) perceive co-teaching in their present co-teaching classrooms?	X	X
Question 2: What are the similarities and differences in pre-K general education and special education co-teachers' perceptions of co-teaching?	X	X
Question 3: What elements of self-efficacy influence pre-K co-teachers' perceptions of co-teaching?		X

Note: Data source 1= PCTS Scores Data source 2= Focus Group Audio-taped transcript

Explanatory Sequential Mixed Methods Design

This study used a mixed methods explanatory sequential design (quan→ QUAL) to collect and analyze quantitative and qualitative data (Bryman, 2014; Creswell, 2014; Creswell & Plano Clark, 2011). In the first phase, quantitative survey data were collected and analyzed. In the second phase, a focus group discussion with groups of co-teachers was used to supplement and extend the findings from the first phase. The primary purpose for choosing this design was to use quantitative findings to help inform the qualitative data collection phase, to address the

research questions using different types of data, and to explain tenets from the theoretical perspectives at different levels of the research (Tashakkori & Teddlie, 2003).

This research methodology capitalized on the inherent benefits of both quantitative and qualitative methods while attempting to counteract biases from each (Greene, Caracelli, & Graham, 1989). Conducting mixed-methods research can potentially lead the researcher to findings that neither design could exclusively generate. Whereas a quantitative research approach supports data collection using a predetermined instrument that yields statistical data such as *The Perceptions of Co-Teaching Survey (PCTS)*, qualitative techniques like focus group discussions are useful for exploring inductive and holistic perspectives of the same phenomena. Therefore, the use of multiple data sources allowed the researcher to assess the credibility of data collected through cross-verification from the survey and a focus group discussion with groups of co-teachers (Cohen & Mansion, 2000).

An explanatory sequential research design can be particularly useful when the result from the quantitative phase helps inform the selection of participants and focus group interview questions in the qualitative phase. Using a mixed methods design was significant for understanding pre-K teachers' perceptions of co-teaching in their pre-K classrooms. The quantitative component highlighted each co-teacher's perception of his/her current co-teaching experience, whereas the qualitative component helped explain their rationale for their particular perceptions of co-teaching. Finally, this explanatory sequential research utilized the thirteen-step process recommended by Collins, Onwuegbuzie, and Sutton (2006).

1. Determining the goal of the research
2. Formulating the research objective
3. Determining the research/mixing rationale(s)

4. Determining the research/mixing purpose(s)
5. Determining research question(s)
6. Selecting sampling design
7. Selecting the mixed methods research design
8. Collecting data
9. Analyzing data
10. Validating/legitimating the data and data interpretation
11. Interpreting data
12. Writing the final report and
13. Reformulating the research questions (Collins, et al., 2006, pp.69-70).

Figure 1 below shows a representation of the quantitative data collection and analysis procedures that took place in phase 1, and the qualitative data collection and analysis procedures in phase 2. Finally, this was followed by an integration of the quantitative and qualitative analysis to present the results of this research.

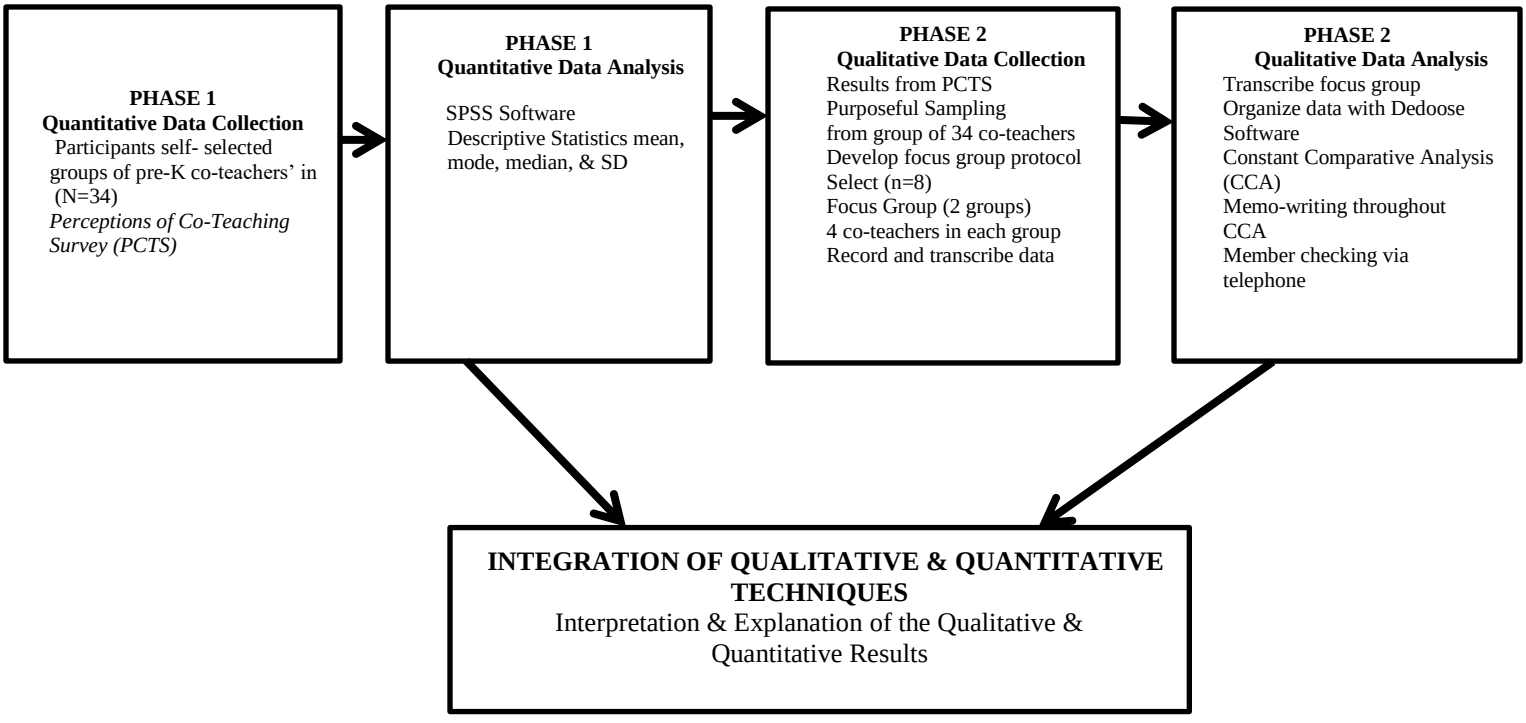

Figure 1. Study design

Description of Site

Professional development sessions are offered at a minimum 6 times per school year. These sessions are usually held for approximately an hour for each group of teachers. There is only one joint professional learning session schedule per school year. The additional professional development sessions are held separately and the content and focus of each varies.

Recruitment and Selection

To establish the population from which to draw the sample for the survey, the school district coordinator for preschool special education provided the email contact for the special education teachers. The special education co-teachers were asked to provide the email contact for their general education partners, since there was no available list of general education co-teachers. As shown in Table 3 below, of the target population of 21 special education co-teachers and 21 general education co-teachers, 19 special education co-teachers and 15 general education co-teachers participated, for a total sample population of 34.

Table 3

Population and Sample

Subgroup	Population	Survey Sample	Focus Group Sample
	(N=46)	(n=34)	(n=8)
Special Education Co-Teachers	23	19	4
General Education Co-Teachers	23	15	4

The sample group was a list of email addresses for all the pre-K co-teachers in the school district (N=46) who are currently working in state funded pre-K co-teaching classrooms. This group was stratified into two subgroups: (a) Special Education Co-teachers and (b) General

Education Co-Teachers. Though a larger sample size is usually preferred to reduce sampling error, Fowler argued that "there is no definitive answer to how large a sample size should be for any given study" (2002, p. 36). Due to the small sample size, emphasis was placed on achieving a high response rate for the surveys (Bartlett, Kotrlik, & Higgins, 2001; Fink, 2003; Fowler, 2002).

Prior to the participants signing the informed consent, communication with the target population was in the form of a face-to-face recruitment session at one of the department's monthly staff development. In the session, the co-teachers were given a copy of the informed consent describing the purpose, time and commitment required, benefits, compensation, risk, and steps take to minimize those risks. The co-teachers were invited to ask questions and placed all signed and unsigned informed consent forms in an envelope provided. This was followed-up with an email with a link to access the *Perceptions of Co-Teaching Survey (PCTS)* to the 34 co-teachers who consented to participate in this research (procedures on the survey administration are provided under data sources and procedures). In order to boost the response rate, two reminder emails were sent to the participants and the survey collection window was extended from two weeks to four weeks. After completing the survey, participants were compensated with a $5 Chick-fil-A gift card.

Survey Respondents' Demography

The survey demographic consisted of pre-K special and general education co-teachers who were currently teaching. The total representation of the survey sample was not necessarily co-teaching partners teaching in the same classrooms. This research focused on the overall perceptions of both sub-groups and not on specific teaching teams. As shown in Table 4, all 34 of the special and general education co-teachers held at least a bachelor's degree in elementary

education and had their required teaching certification eligible to teach in the state. Similarly, all 19 special education co-teachers held a special education teaching endorsement.

Phase One Sample

The population sample for phase one of this study consisted of 34 co-teachers (19 special education and 15 general education co-teachers) who worked in one of 21 pre-K co-teaching sites in a large metropolitan school district. Those co-teachers ranged from novice to expert in their years of teaching and were racially and ethnically diverse. Homogenous purposive sampling was used for the quantitative phase of this study since this study was interested in exploring a similar characteristic shared by everyone in this interest group. Several inclusionary and exclusionary criteria were established to select participants:

1. Certified general and special education co-teachers who were co-teachers in Pre-K co-teaching classrooms.
2. Willingness to participate in this research.

After completing the *Perception of Co-Teacher Survey*, eight co-teachers indicated they were willing to participate in follow-up focus group sessions. The eight co-teachers were stratified into subgroups based on teacher's role (special education co-teacher and general education co-teacher). Those eight co-teachers participated in a focus group to contribute to a discussion about their current collaborative practices, similarities and differences between each pair of co-teacher, and factors that contribute to their perceptions held about co-teaching. The focus groups were mixed containing both special education and general education co-teachers, however only two pairs of co-teachers were actual co-teaching pairs.

The two criteria for selecting participants for each focus group sessions were: (a) completed all the items on the survey and (b) their responses should be different from each other, to understand their differences in perceptions.

Survey Response Rate

Of the 46 co-teachers, a total of 34 (19 special education and 15 general education) co-teachers agreed to participate in phase 1. This was equivalent to an 81% response rate. There were also strategies in place to increase the response rate, such as a carefully designed survey, sending two reminder emails, and extending the survey window for two additional weeks. The initial invitation yielded 16 surveys, a week later this was increased to 20 and the fourth week of the extension period it increased to 36 surveys.

Upon visual examination, one survey was incomplete and another email containing the survey link was re-sent to the respondent. The decision was made to exclude a survey which had the lowest score of 48. According to Osborne and Overbay (2004), this data point was an extreme score which may be a case of intentional or unintentional mis-reporting and can be excluded from the statistical analysis. Since it is unknown why this low score was far from the mean, it was deemed necessary to exclude it from the analysis. Furthermore, including this extreme value would give a misrepresentation of the sample population's perceptions of co-teaching as a whole. Hence, the resulting sample comprised of 19 special education and 15 general education co-teachers, for a total of 34 respondents. Figure 2 below shows the data points for all 35 scores. The last data point on the scatter plot indicate the low score of 48.

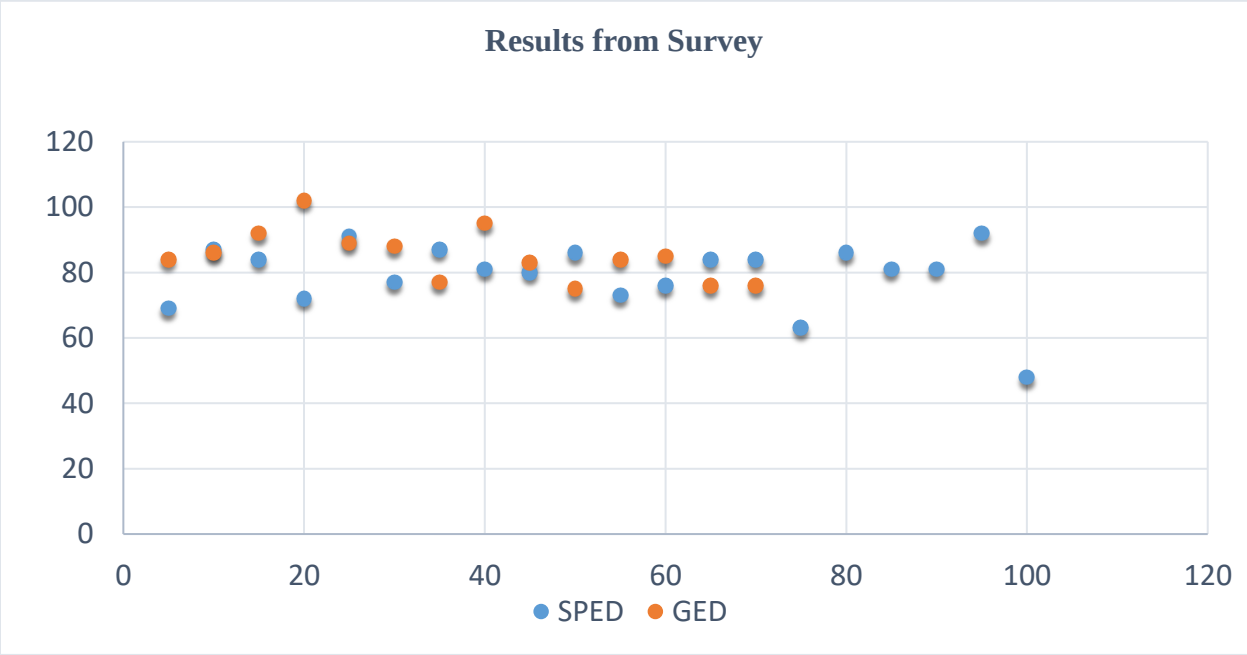

Figure 2. Results from survey

Population Sample

Background on Co-Teachers' Teaching and Co-Teaching Years of Experience

To get an overall picture of the respondents' years practicing as a traditional classroom teacher versus practicing as a co-teacher, they were asked to report their years of teaching and co-teaching experiences. Overall, respondents reported a wide range of years in the teaching profession, ranging from 1 to 27 years. While, the range for respondents practicing co-teaching was between one and nine years, the mean years of co-teaching experience was at least 3 years. Table 4 below represents demography data for co-teachers' who participated in the research.

Table 4 Demography Data of Participants

Gender	Sample	Percent (100%)
Female	33	97
Male	1	1
Years of Teaching Experience	8	23
1-10	12	35
11-20	14	42

21-30		
Years of Co-Teaching Experience		
1-5	25	74
6-10	9	26
Level of Education		
Bachelor's	10	32
Master's	15	43
Specialist's	8	23
Doctoral	1	1
Ethnicity		
Black	7	20
Caucasian	22	65
Hispanic	4	12
Other	1	3

After completing the PCTS, eight co-teachers indicated that they were willing to participate in follow-up focus group sessions. The eight co-teachers were stratified into subgroups based on teachers' roles (special education and general education co-teacher). The focus groups were mixed containing both special and general education co-teachers, however they were not actual co-teaching pairs.

The first face-to-face focus group interview was conducted with two special education co-teachers who are all referred to by their aliases "Jill" and "Gina," along with "Kim" and "Pat" two general education co-teachers. The second session of focus group was conducted with two special education co-teachers "Bella" and "Tammie," and two general education co-teachers "Sally" and "Kerri" who were also referred to by their pseudonyms. Table 5 shows an overview of their teaching backgrounds.

Table 5

Phase 2 Focus Group Participants

Co-Teacher	Years Teaching	Co-Teaching
Jill	9	1
Gina	none	2
Sally	10	5
Kim	12	3
Pat	9	4
Bella	8	4
Tammie	6	1
Kerri	11	1

Data Sources, Procedures, and Sequential Analysis

This section describes both the quantitative and qualitative data collection instruments. The procedures employed for data collection for each phase of the study, and subsequent treatment of data and analysis are also outlined.

Phase 1: Quantitative Component

Survey Assessment

The Perceptions of Co-Teacher Survey (PCTS) was used to learn about each of the 34 participants (19 special and 15 general education pre-K co-teachers) and their perceptions of their present co-teaching experiences in their pre-K classrooms. The researcher was given permission by Austin (2001) to use and modify the original survey to make it applicable to the participants and context of this research. The demography section of the survey was modified to include “pre-K,” “co-teaching experiences,” and “pre-K co-teaching experience.” The original

survey format was developed in consultation with scholars (Bixler, 1998; Fennick, 1995; Guant, 1994; Herbert, 1998; Lackaye, 1997; Oslon, Chalmers, & Hoover, 1997; Wilcczenski, 1995). The PCTS was further modified and validated based on results obtained from a pilot study conducted by Bixler (1998). The PCTS was then converted by the researcher into an online format, self-administered assessment used to collect data from special education and general education co-teachers. Respondents accessed the survey by clicking the link that was sent electronically via email. The survey assessment was displayed using a web-based platform called Qualtrix. Utilizing a web-based format to complete the survey provided advantages like eliminating paper cost, ease and efficiency in making survey accessible to all participants, and the speedy turn-around in data collection (Vehovar, Batajelj, Manfeda, & Zaletel, 2002).

This survey consisted of two major sections. Section one consisted of demographic information about participants and section two asked 27 Likert-type questions. Section two solicited information from participants based on four main categories relevant to co-teachers' perceptions: (a) Co-Teacher Experience of Current Experience, (b) Recommended Collaborative Practices, (c) Teacher Preparation for Collaborative Teaching, and (d) School-Based Supports that Facilitate Collaborative Teaching. Each of these categories aims to provide information for understanding pre-K co-teachers' overall perceptions of co-teaching based on their experiences.

Table 6

Sample of Questions from the Perceptions of Co-Teaching Survey (PCTS)

PART TWO

❑ Co-Teacher Perceptions of Current Experience

Strongly Agree	Agree Neither	Agree	Disagree	Strongly Disagree
5	4	3	2	1

1. My co-teaching partner and I work very well together.	5	4	3	2	1
2. Collaboration has improved my teaching.	5	4	3	2	1

Recommended Collaborative Practices

Strongly Agree	Agree Neither	Agree	Disagree	Strongly Disagree
5	4	3	2	1

6. Co-teachers should meet daily to plan lessons.	5	4	3	2	1
7. Co-teachers should share classroom management responsibilities.	5	4	3	2	1

Teacher Preparation for Collaborative Teaching

Very Useful	Somewhat Useful	Of Limited Use	Not Useful	Don't Know
5	4	3	2	1

11. Student teaching placement in a collaborative class	5	4	3	2	1
12. School district in-service presentations on alternative assessments	5	4	3	2	1

School-Based Supports that Facilitate Collaborative Teaching

Very Useful	Somewhat Useful	Of Limited Use	Not Useful	Don't Know
5	4	3	2	1

18. Provision for scheduled mutual	5	4	3	2	1
19. Administrative support of collaboration.	5	4	3	2	1

The PCTS utilized several strategies to enhance its effectiveness of each survey item and reduce response bias and error (Alreck & Settle, 1995; Fink, 1995a; Fink, 1995b). Each item was worded to specifically ease respondents' abilities to respond. For example, when asking respondents to report frequency of certain activities, a specific time period was given to ensure there was no ambiguity in their responses. (Fink, 1995a). Each item only consisted of one

question and the length of the survey was kept short to minimize the time participants would take to complete it.

Reliability and validity of PCTS. Before the survey was sent out to co-teachers, it was piloted by the researcher to conduct a document analysis to ensure that the survey items were clear, unbiased, and appropriate. The survey was reviewed by a school administrator, a former co-teacher, and an assistant professor with experience in survey design for content validity. Following the completion, each respondent was asked to describe their experiences and the functionality of the survey. Feedback was given and the necessary revisions were made to improve the survey instrument. For example, some questions were reordered and reorganized to improve the clarity and flow of the survey. Upon learning that there were co-teachers who taught subjects that were not listed on question four of the survey it was revised to include "other" for co-teachers to type the subjects they taught. Using Cronbach Alpha, the reliability of the PCTS survey was 0.64.

PCTS data collection. The survey data were collected over a four-week window in spring 2017. All 36 co-teachers who consented at the recruitment session to participate in the study were invited to complete the PCTS assessment. This electronic communication included an attached document with information describing the purpose of the survey, time commitment, benefits, risks, and steps taken to reduce potential risks. Confidentiality was maintained by not collecting co-teachers' names, schools, or other identifying information. This email also contained a link to the web-based PCTS and instructions to complete it. After answering all 35 questions on the PCTS, participants were asked to indicate their willingness to participate in one of two focus group discussions.

Survey data handling. Upon the completion of each survey, the data were securely stored in the password protected survey platform. There was no reason to have paper-based format of the surveys which eliminated the need for data entry since they were collected electronically. At the end of the data collection period, all 36 completed surveys were exported to IBM SPSS Statistics Version 22.0 and stored in a password-protected file. Though the surveys were filed automatically to an online survey platform, the data obtained were also examined via spot check to verify that questions were not answered at random. For instance, responses were sight-edited for conflicting responses related to questions or to check for outliers which would be excluded from the data set (Alreck & Settle, 1995). However, it appeared that there was no such random response found in this data set, except only one that was incomplete. Overall, all the necessary edits were made prior to data analysis.

Survey data analysis. The PCTS was analyzed using IBM statistical SPSS 22.0. Before running descriptive values, each survey was identified as complete and coded with numerical identification numbers. The demographic section of each survey was analyzed to determine the frequency of general and special education co-teachers' responses among questions posed. These results were examined by using cross-tabulation to determine the frequency in general education and special education co-teachers' responses across the four main areas: (a) Co-Teacher Experience of Current Experience, (b) Recommended Collaborative Practices, (c) Teacher Preparation for Collaborative Teaching, and (d) School-based Supports that Facilitate Collaborative Teaching. Further analysis included descriptive statistics (mean, median, and standard deviation) to present the quantitative data in a manageable form. Doing so allowed the researcher to provide a description of the basic features in the data and the measures. Additionally, the use of simple graphical analysis was used to display the data regarding

summaries of similarities and differences in both groups of co-teachers' perceptions of co-teaching to further explain what the data presented.

Phase 2: Qualitative Component

Focus group. According to Patton (2002), a focus group can be considered an interview conducted with a group of individuals with shared characteristics in which they hear each other's responses and construct their own. Focus groups were used to gain deeper insights about (a) pre-K co-teachers' perceptions of co-teaching in their current co-taught classrooms, and (b) to explore further elements of self-efficacy which may influence co-teachers' overall perceptions. The focus group questions were designed based on information drawn from participants' statements on their surveys. This guided the researcher to ask additional questions about the topic being studied in a non-threatening social context (Patton, 2002). Utilizing focus groups in this research helped to gather "in depth data after carrying out quantitative survey research about a topic" (Stewart, Shamdasani, & Rook, 2007, p.41). Therefore, in this study facilitating an open response format of focus group sessions produced rich bodies of data expressed in respondents' own words and contexts. Furthermore, this type of data source allowed a direct interaction with co-teachers and provide an opportunity for clarifications of responses, follow-up questions, and probing of responses.

Focus group data collection. All 36 co-teachers who received an email with a link to complete the survey (PCTS) were also asked to indicate their willingness to participate in one of two focus group session. The only criterion for selection was there interest to participate. Initially, 18 co-teaches responded that they were interested to participate, however due to conflicts with scheduling mutual dates/times. Subsequently, ten co-teachers agreed on two dates. However, two co-teachers were not able attend their sessions due to personal emergencies.

Therefore, a total of eight (four co-teachers in each session) co-teachers participated in the two focus group sessions. While the intention was to have co-teachers and their respective team members represented in the sample, it was not possible since the two co-teachers left the group. Having eight co-teachers was large enough to generate a dynamic conversation to explore answers to pre-determined questions about the topic of co-teaching. Each focus group session took place in a reserved room at one of two co-teaching sites. Participants who indicated that they were interested to participate in the focus group session selected a date and time from a recommended list emailed to them. Specific dates (May 17, 2017 and May 26, 2017) were selected from a list of recommended dates and times to conduct both focus group sessions. Each focus group session lasted 50 minutes. A pre-determined focus group protocol (see Appendix C) was developed and used in each of the sessions, which also included prompts design to cover topics such as co-teacher perceptions, roles of co-teachers, sources of their self-efficacy beliefs, and factors that influenced their perceptions about co-teaching elicited meaningful conversations. Both sessions were also audio recorded and transcribed.

Moreover, the researcher wrote memos following each focus group discussion. Writing analytical memos allowed the researcher to reflect on and record immediate feelings, potential biases, and document observer comments that may lead to an initial analysis of data collected. According to Patton (2003), memo writing provides critical reflection to construct meaning from the interview experience. All memos were maintained as a component of the audit trail procedures and allowed for member checking procedures. Participants who were interested to participate in the study were selected to facilitate discussion to address research questions not fully explored, or ones needing revisiting. Eliciting insights from this sample of co-teachers allowed the researcher not to only listen to the content of the discussion but to observe non-

verbal behaviors in order to confirm meanings behind facts (Creswell, 2014). In addition, conversations among participants portrayed an individual or a shared depiction of perspectives held about co-teaching. Furthermore, this diversity in group perspectives on co-teaching may generate new thinking about pre-K co-teachers' perceptions.

Focus group data handling. The audio-taped focus group interviews were downloaded from the digital recording app and transcribed. Both the audio recordings from the two focus group interviews and the transcriptions were stored on a password protected laptop. These files were also uploaded to a secured online storage system (Google Documents). To organize and manage the incoming qualitative data generated from the two focus group discussions with the pre-K co-teachers, systematic documentation of each data collection and data analysis procedures were carried out and recorded electronically in an audit trail. The audit trail procedure consisted of multiple Microsoft word documents with participants' names corresponding to file content and dates when data were collected or each set of focus group data. All these files were saved on a password protected computer and an online storage device. These were also stored and organized in Dedoose, a web-based application used to store data for mixed methods research, for easy retrieval and analysis. The coding process was done manually, using colored markers, and copying and pasting individual written cards to create categories.

Focus Group Data Analysis

According to Stake (1995), an analysis is a matter of giving meaning to first impressions as well as final compilations, therefore, "there is no particular moment where analysis begins" (p. 75). Data obtained from the focus group were analyzed separately to allow the researcher to pursue emerging assumptions from each focus group with the use of constant comparative approach (Charmaz, 2006).

Constant comparative analysis. According to Leech and Onwuegbuzie (2007), using constant comparative analysis (CCA) was an appropriate qualitative analysis technique for this study to answer the overarching question regarding pre-K co-teachers' perceptions of co-teaching by examining the entire data set in this study. This analysis technique proved useful to "identify and adopt underlying theoretical categories presented throughout the data" (Leech & Onwuegbuzie, 2007, p. 576). In addition, this analytic technique facilitated an inductive process that gradually evolved into a core of emerging theoretical conceptions, which further guided the data collection process (Charmaz, 2006). This study utilized a constructivist approach of CCA, which also led to the incorporation of participants' voices, perspectives, and experiences. Therefore, memos were interwoven throughout the entire analysis and took on a critical role to prompt the researcher to examine data and codes. The interactions with each co-teacher generated thoughts to form connections and questions throughout every stage of analysis. Memo writing gave the researcher space to think intently about the data collected and discovered new insights about them.

The CCA process was carried out in three stages: (1) Organizing and Coding Data, (2) Integrating Categories and their Properties, and (3) Theoretical Categories and their Properties. Stage one started by transcribing each audiotaped recording of the focus group discussions into Microsoft word document. The transcripts were uploaded into Dedoose. This allowed the researcher to highlight excerpts and code them using researcher-defined terms. This application helped organize and label the data for easy storage and retrieval. The process of the analysis is illustrated in Figure 3 and is described in detail.

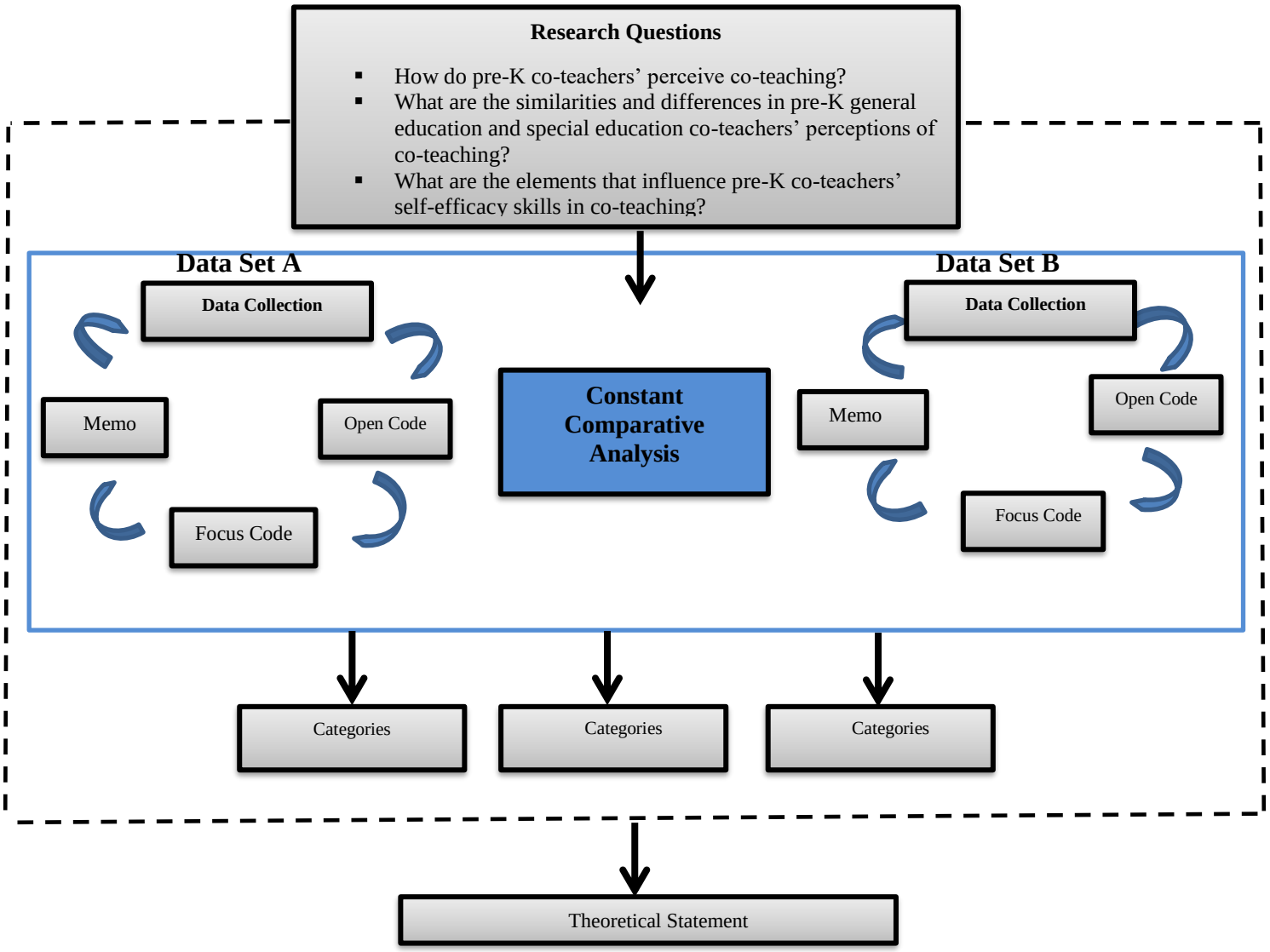

Figure 3. Overview of qualitative data analysis process

The entire analysis phase was guided by the research questions. The first stage began by coding the data set. Coding is basically "categorizing segments of data with a short name that simultaneously summarizes and accounts for each piece of data" (Charmaz, 2006, p.43). This allowed the researcher to grapple with the data in search of meaning. In addition, Saldana's (2009) codes-to-theory model provided a framework throughout this process. Therefore, data

analysis was cyclical in nature and involves coding and re-coding to define and refine categories and themes that emerge within the data.

Stage One

Open coding. During open coding, data fragments of the data including words, lines, segments, and incidents were labeled and studied for analytical interpretations (Charmaz, 2006). During this phase of open coding, the goal is to remain open for any possible direction indicated by the data and occasionally in vivo codes may use when necessary to validate this process. For example, the statement "I really enjoy my co-teaching experience" was coded as an in vivo code. During the coding process, the researcher looked for implied assumptions gained from memos which elicited prompts that there were gaps in the data collected which further provided insights on the type of data to collect next.

Focus coding. During the focus coding cycle, the most applicable open codes reexamined against emerging data to develop categories. This further helps to separate, sort, and synthesize large amount of data (Charmaz, 2006). For instance, "love for teaching," "love for children," "happy" were coded and sorted as focus coding among the data. As a result, focus coding helped determined the salient codes needed to form theoretical integration. Both coding cycles were carried out through subsequent focus group sessions using the emerging theory in mind by first comparing data set to data set, then comparing data set to theory.

Stage Two

Integrating categories and properties. The second stage consists of integrating categories and properties, which move away from coding within each data set to advanced memos and the refinement of conceptual categories. At this stage, the researcher constantly compares codes that emerged within each data set to codes obtained from another data set. This

process was repeated with the entire data set. For example, categorical codes like “love for co-teaching,” “enjoyment,” “love for the kids,” “fulfillment,” and “happy” were placed into one broad property since they have all fit into the same conceptual category.

Stage Three

Forming theoretical codes. At this stage, the researcher’s goal was to define the theory by employing delimiting techniques such as sampling and sorting. At this stage, the researcher’s goal was to look for saturation from emerging codes. At this level of CCA, theoretical codes specified possible relationships between categories developed from the focused coding stage. Hence, codes form an analytic story towards a particular theoretical direction. Assumptions were made about “preliminary set of ideas collected and whether they can be explored and examined analytically by writing about them” (Charmaz, 2006, p.71). Consequently, satisfactory codes created led towards making a theoretical statement, then the writing process began. This report included the coded data, series of memos, and the theoretical conception obtained throughout the progression of the analysis (Charmaz, 2006).

Integration of Quantitative and Qualitative Design

The qualitative and quantitative research analyses were interpreted and explained to inform the findings and interpretations of this study. The combination of both quantitative and qualitative data analyses were carefully integrated into a coherent whole (Onwuegbuzie & Teddlie, 2003; Teddlie & Tashakkori, 2009). This further led to discussion, implications, and recommendations for future research on this topic.

Data Validation

A credible way to address the criticism of assessing the validity of findings in mixed methods research is through the process of legitimation. Studies that use both qualitative and

quantitative methodologies aim to capitalize on the "complementary strengths and non-overlapping weaknesses" of this type of design integration (Onwuegbuzie & Johnson, 2006, p.58). The primary reason for utilizing the technique of legitimation of data in this study was to minimize any potential of inherent weaknesses in one design to compensate with the strength of the other design. According to Onwuegbuzie (2003), legitimation of data occurs throughout the entire methodology (design, data collection, data analysis, and interpretation stages) of the study. Therefore, explanation of how data legitimation was accomplished at each phase was critical to bolster findings and interpretations of this study. The following illustration highlights the consideration of legitimation throughout the three stages of the research.

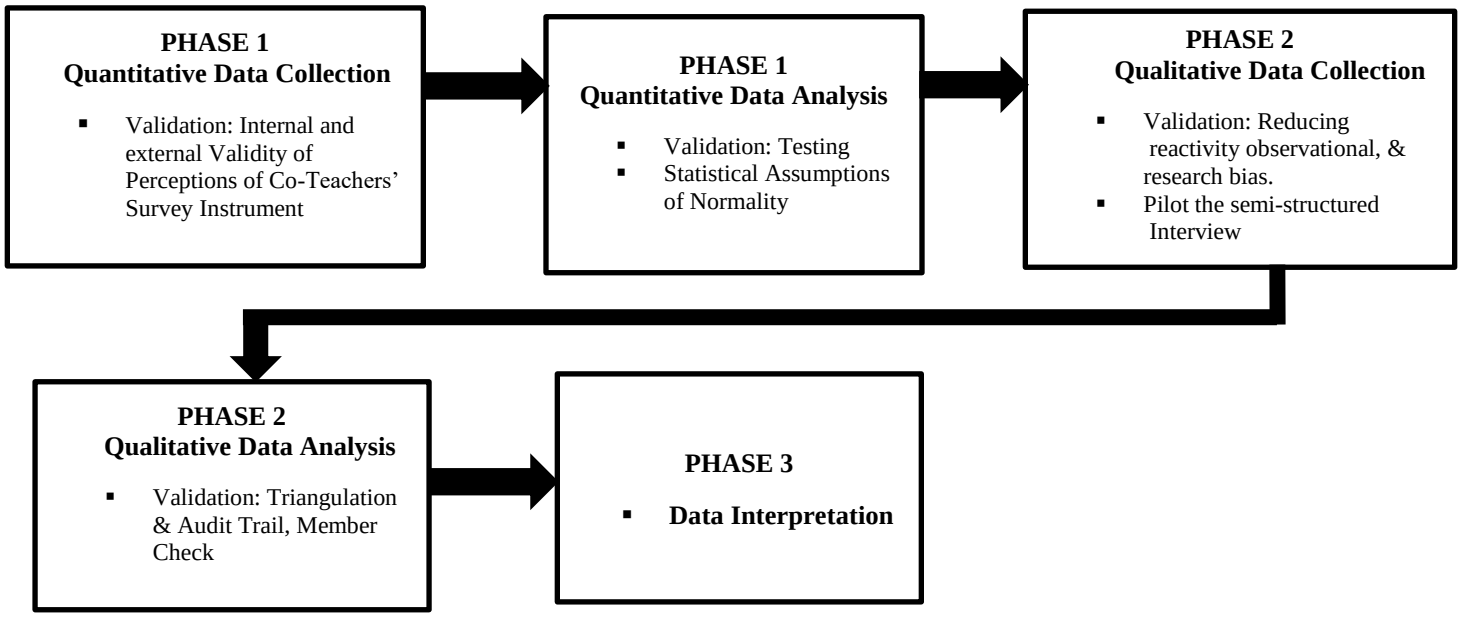

Figure 4. Legitimation process

In the quantitative data collection stage (phase1) of this study, legitimation was accomplished by confirming the internal and external validity of the survey instrument. During the quantitative data analysis stage, the data analyzed was validated by testing for statistical assumptions for normality. This consideration was highly critical since it influenced the selection

of the participants for the qualitative phase and the validity of data collection that was carried out. Onwuegbuzie and Daniels (2003) acknowledged the importance of validating quantitative analysis since it helped to minimize errors when making interpretations from the descriptive statistics.

In the qualitative data collection stage (phase 2), there were potential threats to legitimation such as observational bias, researcher's bias, and reactivity. According to Onwuegbuzie (2003), observational bias may occur in the qualitative phase of mixed-method studies when the researcher does not collect sufficient data to answer research questions being asked. Therefore, this study was designed to use the PCTS assessment and focus group discussions to probe co-teachers' perceptions of co-teaching, and what elements of self-efficacy influenced the perceptions co-teachers held about co-teaching. Besides, there was also opportunities to conduct a second round of focus group discussions if more data were needed to probe co-teachers' responses to gather richer descriptions. The survey results coupled with the focus groups sought to explore the similarities and differences between general and special education teachers helped minimize reactivity.

An awareness of the researcher's perspective on the topic being studied can influence the data collection phase of the research. This was addressed by crafting each question for the focus group to avoid asking any leading questions or statements that may show researcher's preferences. According to Onwuegbuzie and Leech (2007b), these types of biases can be passive or active and influence the data collected.

The researcher was also mindful of her biases by stating her positionality. Another way to minimize researcher's preconceived biases was to actively bracket personal experiences aside and focus on participants' stories. The researcher employed the use of a journal to bracket

instances of biased thinking and her responses to those of participants' shortly after conducting the focus group discussions to minimize potential biases (Creswell, 2014). Additionally, the use of a standard pool of protocol interview questions and follow-up questions helped reduce reactivity.

One way to strengthen legitimation in both phases of analyses (quantitative and qualitative) is through triangulation. Leech and Onwuegbuzie (2007) recommended triangulation to increase the rigor and trustworthiness of the research results. Therefore, analyzing and comparing the results obtained from the survey assessment, focus group sessions, and analytical memos helped countered any concern with regards to the credibility of the research findings (Merriam & Tisdell, 2016).

In addition, the data collection and data analyses stages of this research were carefully documented and displayed in an audit trail. This will help demonstrate how the research was conducted and maintain internal validity/credibility of the study. Conducting member checks were done to establish trustworthiness in this research. Given that this study sought to explain and understand pre-K co-teachers' perceptions of co-teaching it was essential to ensure that their stories were not misrepresented or altered (Merriam & Tisdell, 2016). Therefore, all participants who shared in the qualitative component of this research were provided a copy of the data analysis via email to solicit their feedback. They were also asked to provide additional explanations or clarifications through telephone conversations if narratives were in any case contrary to their original statements made.

Member Check Procedures

Another legitimation procedure in this study included two member checks. Individualized member checks were done to validate and verify the qualitative results to reduce potential

researcher's bias (Doyle, 2007). These were member checks were done via two telephone conversations (June 8th, 2017) with two participants. These participants had the option to suggest how they wanted the member checking procedures to be carried out (e.g., meet face-to-face, telephone, or email). Carlston (2010) pointed that providing participants with alternates option is an indicator of participant empowerment. Both co-teachers made statements in their focus group discussion about their perceptions of co-teaching that were incomplete and unclear. Both co-teacher engaged in conversations that lasted at least 10 minutes each. Those informal telephone dialogues helped to verify the accuracy of their previous statements made. Also, the researcher wanted to find out if the co-teachers agreed with the initial interpretations made from the statements were accurate. They cleared up several ambiguous statements and amplified their responses to include examples to make their clarifications clearer. Immediately following those conversation, updates were made to their initial reports that restated and summarized their arguments. Additionally, co-teachers who participated in the study were presented with the preliminary findings during a professional development session or via email.

Positionality

My personal experiences and role as a special education co-teacher for six years, inspired me to explore co-teachers' perceptions and influenced how I conducted this study. As a co-teacher, I encountered challenges regarding how some general and special education co-teachers perceived co-teaching. These observations and experiences motivated me to question the foundations of co-teachers' perceptions and how they can affect the collaboration process and the overall success of co-teaching classrooms. Therefore, it is impossible to separate my experiences as a co-teacher from influencing the interpretations of participants' experiences and so, it was necessary to be aware of my biases as I carried out this inquiry (Maxwell, 2005).

To critically understand my participants' holistic experiences as special education and general education co-teachers which may vary and cannot be quantified, I played the role of the primary instrument for data collection and analysis. In an explanatory sequential study, there were numerous opportunities for the researcher to obtain an in-depth or expanded understanding of the phenomenon being studied, so the researcher can use non-verbal communication, summarize, and clarify data received with respondents for the accuracy of interpretation (Merriam & Tisdell, 2016). Based on this subjectivity, I was informed by what Patton (2002) called "emphatic neutrality and mindfulness" (p. 40). This guided me to understand the worldviews, experiences, and beliefs that my participants have constructed through my direct interactions with them without imposing my ideas to their experiences.

Human Participation and Ethics Precaution

Institutional Review Board approval was granted from the Office of Human Research of Human Research at Georgia State University prior to any contact with potential participants. The research was also approved by the participating School District's office for Research Evaluation. This research conducted presented little or no risk and ensured anonymity of participants were carried out. Steps were taken to minimize any risks in both phases of this study.

In phase 1, to ensure survey respondents identities remained anonymous, their names, signature, schools' names were not asked on the survey. At the recruitment session, the target participants were presented with an individual sheet confirming (a) their participation in the research was completely voluntary, (b) the possible risks and discomforts, (c) the broad benefits, (d) compensation, (e) that they could withdraw from participating in this research even after consenting.

In phase 2, co-teachers who participated in the survey were asked if they were interested in participating in one of two 50-minute focus group discussion session. Potential participants were presented with possible dates and times for a focus group session. The ten participants who volunteered to participate in the focus group session were given an information sheet stating that (a) their participation was voluntary, (b) possible risks or discomforts, and (c) benefits of participating in this research. The email addresses of those who indicated that they wanted to be a part of a focus group were coded and stored in a separate location from those who participated in the survey data to ensure confidentiality and privacy.

All data collected from the focus group sessions were stored securely in a password protected file on a computer. The audio-taped recordings were downloaded and transcribed, then uploaded to Dedoose where they were further organized and labelled. An audit trail of each procedure carried out throughout the qualitative phase of the study was clearly documented.

Summary

This research used an explanatory sequential mixed-methods research to investigate pre-K co-teachers' perceptions of co-teaching, similarities and differences between both groups of co-teachers' perceptions and the elements of self-efficacy that influence these perceptions held. Quantitative data was collected using The PCTS from 34 general education and special education co-teachers in their current co-taught classrooms. Quantitative analysis was carried out using descriptive statistics.

In the second phase, qualitative data were gathered using two sessions of focus group discussions. These sessions were conducted with of four special and four general education pre-K co-teachers. Data analysis was conducted using constant comparative analysis. This chapter also included integration of data sources used to inform interpretations, explanation, and

recommendations of the study as well as the discussion of legitimation strategies, and human participation and ethics precautions.

CHAPTER 4 RESULTS

Based on the implications generated from the review of the literature, this study investigated pre-K co-teachers' perceptions of their present co-teaching experiences, the similarities and differences between general education and special education co-teachers' perceptions of co-teaching, and what elements of self-efficacy influence these pre-K co-teachers' perceptions of co-teaching. A quant-QUAL sequential explanatory mixed-methods design was used to address the three research questions:

1. How do pre-K co-teachers (both general education and special education co-teachers) perceive co-teaching in their present co-teaching classrooms?
2. What are the similarities and differences in pre-K general education and special education co-teachers' perceptions of co-teaching?
3. What elements of self-efficacy influence pre-K general education and special education co-teachers' perceptions of co-teaching?

After the preceding questions were investigated, the following results were generated based on the integration of phase 1 and phase 2 data analyses:

1. Pre-K co-teachers have fairly positive perceptions of their current co-teaching experiences.
2. Professional interpersonal relationships between pre-K special education and general education co-teachers foster positive perceptions of their co-teaching experiences.
3. Pre-K co-teachers desire personalized professional learning opportunities to guide and improve their co-teaching experiences.

4. Pre-K co-teachers recognized the importance of effective verbal communication as the key to successful co-teaching experiences.
5. Pre-K special and general education co-teachers shared more similarities than differences in their perceptions of co-teaching.
6. Co-teachers had high levels of self-efficacy in co-teaching.

This chapter reports the integration of quantitative findings of the *Perceptions of Co-Teaching Survey (PCTS)* data collected in phase1and the qualitative findings generated in the focus group discussions in phase 2.

Research Question 1: How do pre-K co-teachers (both general education and special education co-teachers) perceive co-teaching in their present co-teaching classrooms?

Part one of the survey had seven questions which were used to solicit demographic information about the 34 co-teachers, while the remaining 27 items on part two of the survey were used to answer research question one. Part two was divided into four subscales, (a) Co-Teacher Perception of Current Experience, (b) Recommended Collaborative Practices, (c) Teacher Preparation for Collaborative Teaching, and (d) School-Based Supports that Facilitate Collaborative Teaching. The four subscales addressed different components of co-teachers' perceptions of their co-teaching experiences. All the questions from numbers 27 through to 35 were stated in a declarative format. A Liker-scale was used with five indicators. Each of these questions was scaled from five to one, with five being the highest and one the lowest. While the scales were the same throughout the survey, the indicators varied based on subscales. For example, on subscale one and two the indicators asked respondents to select from "Strongly Agree" to "Strongly Disagree," and on subscale three, respondents selected options

from “Very Useful” to “Don’t Know.” Table 7 below shows the descriptive statistical measures obtained by the 34 co-teachers on all four subscales of the survey.

Table 7

Pre-K Co-Teachers’ PCTS Descriptive Statistics

Subscale	mean (possible range)	median	range	SD
Perceptions of Current Experience (5 questions)	20.12 (5-25)	20	14-23	2.38
Recommended Collaborative Practices (10 questions)	41.48 (10-50)	41	33-50	5.20
Teacher Preparation for Collaboration (7 questions)	11.97 (7-30)	12	7-32	5.22
School-Based Support that Facilitate Collaboration (5 questions)	9.03 (5-25)	8	5-15	2.72
Total	83	84	63-102	7.87

The purpose of this survey was to generate pre-K co-teachers’ (special and general education co-teachers) self-reported responses and examined their perceptions of their present co-teaching experiences. The results from the *PCTS* indicated that all 34 general and special education pre-K co-teachers had relatively positive perceptions of their co-teaching experiences. This was evident in each co-teacher’s total score obtained on his/her survey. The highest possible score that a co-teacher could receive was 135 and the lowest was 27. The results obtained for each of the 34 surveys were distributed by each rating scale (1 to 5) and proportional to the number of questions in each subscale to determine each respondents’ perceptions (low,

moderate, or high). For example, a co-teacher who got an 84 would be classified as a co-teacher with moderately high perception of co-teaching.

The table above illustrates that they all the results were within the range of 63 and 102. The analysis revealed that none of the pre-K co-teachers had an exceptional high perceptions of their co-teaching experiences. Individual examination indicated that 75% of the respondents got between 81 and 102, which meant that they selected mostly 3s and 4s for each item on the survey. No co-teacher selected all fours and fives. The mean score of the survey was 83. This measure indicated that on average co-teachers' had moderately positive perceptions of co-teaching. To paint a more comprehensive picture of the co-teachers' performance on the survey, it was important to interpret and compare the measures obtain on each of the four subscales.

Each of the four subscales gave a different depiction of co-teachers' perceptions and complemented the overall report of the survey. For instance, the highest mean score of 20.12 was obtained on subscale 1 (Co-Teacher Perceptions of Current Experience, questions 8-1) whereas the lowest mean of 9.03 was obtained from subscale 4 (School-Based Support that Facilitates Collaboration, questions 30-35). Questions from subscale 1 asked respondents to answer questions ("Strongly Agree" to "Strongly Disagree") regarding how well they and their co-partner work, if co-teaching is a worthwhile model, and how well they and their co-teacher value each other's feedback. Subscale 4 solicited responses ("Very Useful" to "Don't Know") in relation to the value co-teachers' placed in receiving administrative support, adequate teaching supplies, in-service training, and time allocated to plan lessons. The mean score of 9.03 revealed that co-teachers did not necessarily attribute school-based support as a top priority in valuing their perceptions of co-teaching. It may also have meant that they had limited administrative

support. Interpretation of scores obtained on the survey were aided by the focus group data which indicated that all eight participants were displeased with their administrative support and provided several scenarios in which their co-teaching experiences would have been more valuable and less challenging if they have had more support from their administration.

Another compelling finding was from subscale 3 (Teacher Preparation for Collaborative Teaching), which had an overall mean score of 11.94. Seven questions solicited responses from co-teachers about their academic training and co-teaching experiences, mentoring, student teaching placements, and college courses that were beneficial for their co-teaching experiences. All 34 co-teachers selected responses from the scale "Very Useful to "Not Useful." The mean score of 11.94 was the second lowest score when compared to the means obtained from the other three subscales. A closer investigation on each co-teacher's completed survey highlighted that over 80% of the respondents selected low valued indicators like "Of Limited Use" and "Not Useful" One possible explanation of this finding is that co-teachers may not have personally experienced any formal preparation or training in their pre-service programs and as a result it was difficult for them to value those statements as factors that they considered necessary for successful co-teaching experiences. Indeed, the focus group data analysis found that none of eight co-teachers who participated in the focus group sessions had prior knowledge, practical experience working as a co-teacher, and stated that on-going personalized professional development was warranted to support their co-teaching journeys.

Contrasting results from subscale 2 indicated that on all ten questions (13-22) co-teachers were extremely positive about their current co-teaching experiences. The first five questions on this subscale (questions 13 to 17) asked respondents to answer each statement based on the extent to which they agreed with statements about recommended practices that influence

co-teaching. These questions were followed by five additional questions (questions 18-22) which addressed the value each co-teacher placed on recommended collaborative practices like schedule planning time and sharing responsibilities. The scores respondents received on this section of the survey reflected that 26 co-teachers received the maximum score of 50. The responses suggested that most of the co-teachers supported recommended collaborative practices as a major component that supports meaningful co-teaching experiences. For example, question 15 asked, "Co-teachers should regularly offer feedback." All 34 co-teachers selected "Strongly Agree" as their answers. From the examination of the survey result, pre-K co-teachers had fairly positive perceptions of their co-teaching experiences and despite factors like administrative support that did not contribute to their positive beliefs held. Results obtained from the focus group discussions are provided in the next section as additional data on teacher perceptions of co-teaching.

Focus Group Results

Pre-K Co-Teachers' Perceptions of their Current Co-Teaching Classrooms

Data from the focus group discussion indicated that all eight pre-K co-teachers (four special education and four general education co-teachers) had fairly positive perceptions of their current co-teaching experiences. They all thought that co-teaching was a worthwhile endeavor and were happy to be a part of that instructional model. Those co-teachers who participated in the focus group sessions had little or no previous experience in co-teaching classrooms. Before working in their current classrooms, some general education co-teachers had no knowledge of the co-teaching model or had not seen it in practice. Similarly, both special and general education co-teachers within their first three years of co-teaching experience stated that co-teaching made them more anxious when they compared it to their prior roles as teachers in

self-contained and general education classrooms. Those who had been co-teaching for over three years noted that they thought co-teaching contributed positively to their professional growth and developed coping techniques to deal with specific challenges in their classrooms. The eight co-teachers in the focus group sessions discussed their co-teaching experiences in ways that often overlapped with the experiences of others, but they sometimes highlighted unique experiences and perspectives as well. The beliefs of both groups of co-teachers concerning co-teaching can be categorized into two distinct themes: (a) Perceptions Motivated by Intrinsic Factors, and (b) Perceptions Motivated by Extrinsic Factors.

Perceptions based on intrinsic factors. As the co-teachers discussed their personal views on their co-teaching experiences, it appeared that their perceptions were framed by internal factors. All but two co-teachers (a special education and a general education co-teacher) noted that their current co-teaching experiences were positive and indicated that they wanted to stay in co-teaching classrooms. Those who acknowledged that they enjoyed co-teaching and saw it as a great teaching model attributed this view to their love for the diverse student group in their classrooms. Others spoke about the fulfillment and camaraderie they experienced working with another capable adult to solve problems. The "love for the job" was a typical response among participants in the focus group when asked, "What are your thoughts about co-teaching?" For instance, Gill noted that "Seeing the kids happy makes me happy." Other co-teachers shared similar sentiments that demonstrated that they were satisfied with co-teaching since they considered it to be a factor in their students' academic success. Furthermore, they stated their positive perceptions of co-teaching improved their interpersonal relationships with their co-teaching partners. Two member checks were carried out with two co-teachers to determine the accuracy of statements made about their perceptions of co-teaching during the focus group

discussion. They got an opportunity to clarify their initial statements and indicated that their co-teaching experiences were indeed meaningful. These narratives were also supported by the survey data (subscale 2) which pointed out that co-teachers attributed their positive perceptions to their current co-teaching experiences with their co-partners and the activities they together to collaborate.

Five of the eight participants from the focus group framed their positive perceptions of co-teaching because of professional relationship formed with their team members. Prolonged interaction and shared-collaboration were cited by some participants as inspiration to persevere during challenging times. Positive interaction between teams of co-teachers usually blossomed into lasting friendships, which further promoted positive perceptions of co-teaching between the duo. Such perceptions helped to foster a positive environment for the majority of those co-teachers. From the scores obtained among the 34 co-teachers indicated that co-teachers placed a higher value on teamwork building and love for the co-teaching model than on external factors like support from school administrators and professional learning opportunities. Overall, co-teachers seemed to place a significant value on their daily professional interaction with their co-teachers and their collaborative practices and not on their professional development or support from their administrators. This was supported by relatively high means found for the subscale that examined co-teachers based on their collaborative practices.

Perceptions based on extrinsic factors. In both focus group sessions, co-teachers also noted that their positive perceptions were due to external factors. For example, ongoing support from team members, positive relationships with co-teachers, and use of collaborative instructional strategies, among other factors, influenced almost all co-teachers' positive opinions about their co-teaching experiences. The reduced student-teacher ratio was reported as another

reason why many co-teachers opted to remain in their present co-teaching classrooms. Gina, a special education co-teacher, noted that her love for co-teaching grew due to the lower student-teacher ratio that promoted smaller group size and was able to provide more one-to-one support for students. Other co-teachers shared similar views that framed their perceptions of co-teaching. Furthermore, some co-teachers also credited their co-teaching environment for improving academic outcomes for the diverse ability student population. Having two certified teachers in the classroom catering to students' needs was thought to be an advantage that boosted co-teachers to enjoy their experiences despite challenges.

Exceptions in perceptions among co-teaching. While most of the co-teachers agreed that they loved their co-teaching experiences and that the teaching model had improved their professional growth, there were several exceptions. The primary concern shared among this group was the lack of administrative support and on-going professional learning opportunities for co-teachers.

This assumption was also supported by the survey data that showed that all 34 co-teachers selected the indicator "Not Useful" to describe their administrative support for co-teaching." A similar trend was also found in question 33, which asked co-teachers to value the importance they placed on in-service training and workshops on their perceptions of co-teaching. Co-teachers selected "Of Limited Use" and "Not Useful" as their predominant responses. An examination of the distribution of survey responses coupled with the focus group analyses suggested that on-going lack of administrative support was a major concern among co-teachers. Figure 5 below represents the integration of both survey and focus group results.

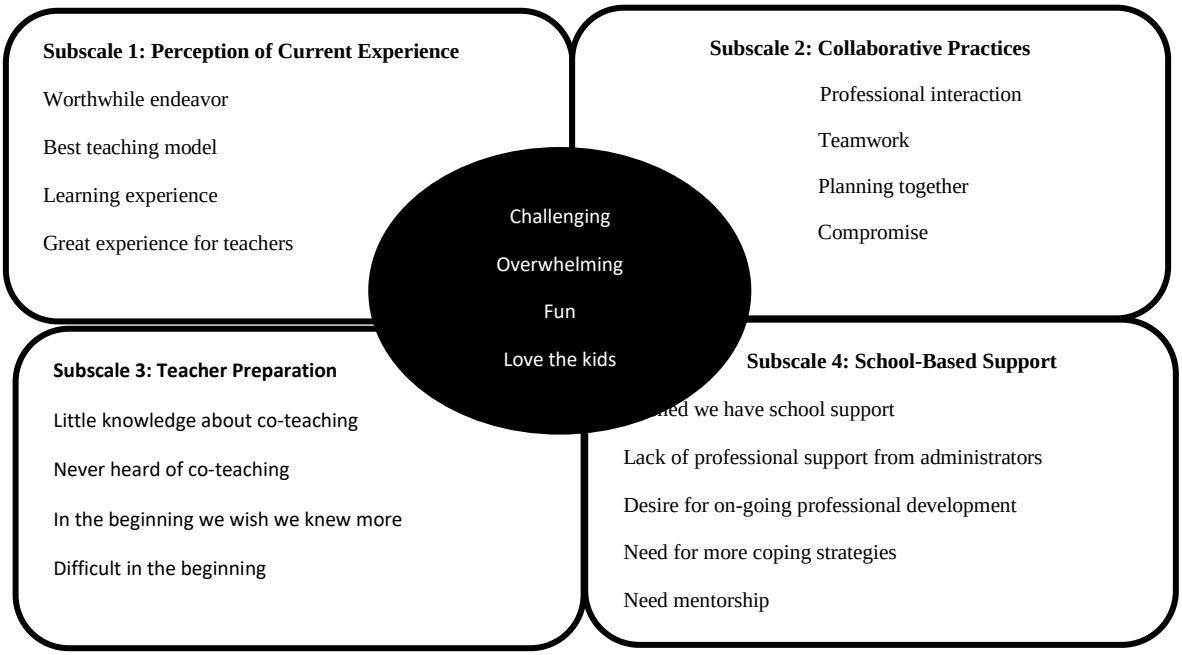

Figure 5. Integration of the survey and focus group results

Overall, the survey results indicated that pre-K co-teachers had moderately positive perceptions of their co-teaching experiences. Recommended collaborative practices were considered very important to the teachers in this study, although they had little training in collaboration. School-based supports that facilitated collaboration were lacking yet welcomed. The focus group discussions results indicated that all eight co-teachers had positive perceptions of their co-teaching experiences. Co-teachers were also able to state that they desired collaborative professional training to address areas like curriculum planning and student assessment.

Research Question 2: What are the similarities and differences in pre-K general education and special education co-teachers' perceptions of co-teaching?

Table 8

Similarities and Differences in Special and General Co-Teachers Perceptions of Co-Teaching

Subscale	mean		median		range		SD	
	SE	GE	SE	GE	SE	GE	SE	GE
Perception of Current Experience	19.89	20.43	20.00	21.00	14-23	17-23	2.28	1.65
Collaborative Experiences	40.63	42.64	41.00	41.50	33-50	33-50	4.36	6.14
Preparation for Co-Teaching	11.37	12.79	10.00	12.00	7-23	7-32	3.73	6.83
Administrative Support	9.84	9.29	8.00	9.50	6-13	6-15	2.34	3.24

The results for both groups of co-teachers were tabulated, reviewed, and compared to provide descriptive statistics on co-teachers' the overall performances on the PCTS. Table 8 reveals that special education and general education co-teachers had mean scores that were relatively comparable on all four subscales. Further analysis found that, on average, both groups of co-teachers had similar responses to questions on each subscale. This was evident with their high mean and median scores obtained on subscales 1 and 2, and low mean and median scores on subscales 3 and 4. Low scores on those subscales by both groups of co-teachers were also substantiated by the results of the focus group discussions in which both groups of co-teachers acknowledged that they learned a lot about co-teaching from their daily collaborative interactions

with their co-partner. They also stated that the lack of desired professional development opportunities and administrative support made their co-teaching experiences more challenging.

Results from Focus Group Data

While both groups of co-teachers' responses indicated shared perceptions of co-teaching, there were also differences among them as well. All of the co-teachers attributed their similarities and differences in their perceptions of their current co-teaching practice to their individual roles in their classrooms. For instance, special education co-teachers commonly stated that they appreciated the co-teaching environment because it provided them the opportunity to offer differentiated instructions to support the diverse student population in a general education setting. Most general education co-teachers, however, argued that they appreciated the classes based on their roles as content experts. The similarities and differences between both groups of perceptions are discussed next.

Similarities in Special and General Education Co-Teachers' Perceptions

Acknowledgment of each other's expertise. Focus group data revealed that both special and general education co-teachers highlighted each other's areas of strengths and areas that needed improvement. On one hand, the most commonly cited strength of special education co-teachers by their general education counterparts was that they were the reading and literacy specialists and implemented strategies to reduce inappropriate behaviors in the classrooms. On the other hand, special education co-teachers considered general education co-teachers to be lesson planning and content area specialists in co-teaching classrooms. Additionally, throughout the entire discussion both groups of co-teachers examined their biases about expectations of each other, responsibilities, strengths, and areas of improvement. The data revealed similarities between both sub-groups within the co-teaching classrooms. Therefore, the desire to work

collaboratively in co-teaching classrooms called for awareness of differing expertise and a desire to compromise.

Tension arising from inequitable sharing of responsibilities. Both groups of co-teachers agreed that one of the biggest challenges faced in their co-teaching classrooms was the issue of equitably dividing roles and responsibilities. Both groups of co-teachers stated that they felt as though the other team members were experts in specific areas. This perception created discomfort as co-teachers sought to assign classroom roles without creating conflicts. These conflicts may become long-term constraints that can have a negative impact on co-teachers' experiences in co-taught classrooms. Moreover, this perception was shared by all eight co-teachers. Therefore, they concluded that having open discussions about how to assign specific roles would reduce or minimize conflicts. The data showed that, role assignments were determined based on each other's level of expertise, preference, and comfort performing those tasks. Both types of co-teachers explained that "sharing equal responsibility" in a co-teaching classroom helped to promote positive perceptions among co-teachers.

From the special education co-teachers' perspectives, tension was unavoidable. They viewed themselves as performing roles that primarily included "differentiation of instruction and behavior management." For example, Bella stated that even when there were clearly defined roles, there were still conflicts due to general education co-teachers' tendency to assume the lead in most instructional task. Other special education co-teachers commented on unequal distribution of responsibilities and acknowledged that it was the main source of tension. Except for one special education co-teacher, everyone revealed that their general education co-teachers were the lead teacher in instructional tasks for approximately 90% of the school day. Ultimately, special education co-teachers became frustrated, which may have led to have negative

impressions of their co-teaching experience. These sentiments were espoused frequently by co-teachers who had previous experiences working as self-contained and/or general education teachers.

Likewise, general education co-teachers also complained about conflicts and tension that affected their beliefs about co-teaching. All the general education co-teachers acknowledged that they were the primary instructors in their co-teaching classrooms. This role was associated with "some amount of power," as one general education co-teacher stated. In fact, all four general education co-teachers admitted that they naturally took on the role of the leader in classrooms. Therefore, at times they assumed most of the decision-making responsibilities without consulting their special education partners. They further stated that their performing most of the roles in the classroom was as a result due to their pre-service training and traditional experience as general education teachers. Ultimately, those actions were perceived by special education co-teachers as undermining their professional authority, which usually resulted in conflicts between the pair. Therefore, when asked "How do you resolve conflicts in your co-teaching classroom?" all the participants agreed that "compromising" was the best way to avoid and resolve uncomfortable situations between co-teaching partners.

Desire to compromise. All eight co-teachers repeatedly stated that they had to negotiate with their partners daily to have successful co-teaching experiences. Therefore, they agreed that for co-teaching to work both team members had to intentionally work through differences through compromise. While they saw the need to compromise as the appropriate way to cooperate and persevere through challenging times, those co-teachers also recognized that compromising could be difficult when one party refused to meet another half-way. According to Jill (a special education co-teacher), following a collaborative approach rather than one that

sought validation for personal efforts was welcomed and encouraged one to let things go and not to "sweat the small stuff" in order to achieve normalcy in the daily routines.

The participants expressed their desire to find a "middle ground" and "do what's best for the students," and not for their "egos." Everyone nodded in agreement while some co-teachers expressed that "they did not realize how much they have not cooperated with their teammates," which was unintentional. Three of the four general education co-teachers stated that they were unaware of their actions. Kim further explained that she was guilty of performing all the roles and assuming sole responsibility for planning and instructional tasks since things go so fast in a pre-K classroom and teachers should make decisions quickly without considering the opinion of others. However, they saw how this counter collaborative practice might fuel further conflicts between teachers and potentially affect their perceptions of co-teaching.

Data analyzed from both focus group sessions showed that special education co-teachers preferred to avoid disputes by suppressing their feelings. They feared that saying something or expressing their opinions might lead to further animosity. They also cited an increase in collaboration and positive interaction when they complied with the general education co-teachers' guidelines as promoting a successful co-teaching experiences. Other special education co-teachers joined the conversation and implied that they thought special education co-teachers compromised more than general education co-teachers. However, their general education counterparts seemed surprised by the revelation and offered their apologies on behalf of their colleagues. All the participants in both sessions argued that co-teachers equally desire to compromise

Students improved academic outcomes. The data revealed that all co-teachers supported co-teaching due to the improvement in students' academic skills. The majority argued

that they believed that the low student-teacher ratio was the primary reason for improvement in their students' academic abilities. Both groups of co-teachers thought that the numerous teaching strategies used along with frequent opportunities to differentiate instructions were effective in enhancing academic progress of pre-K children. While each co-teacher did not elaborate on specific academic improvement, they frequently made references to student growth. Special education co-teachers embraced the notion that having two professionals supporting students with disabilities have a positive impact on their learning.

Due to prolonged engagement with their teammates, special education co-teachers noted that they increased their content knowledge and were also better able to plan and teach students more comfortably. In addition, all four general education co-teachers indicated that they thought that their teaching abilities had been positively affected by interaction with special education co-teachers. These co-teachers also attributed students' success to the collaborative teamwork of two professionals with complementary strengths. All the co-teachers agreed that they were more motivated to work in co-taught classrooms given the steady growth in their students' successes. Overall co-teachers seeing their students happy and learning helped them embraced the "true meaning of co-teaching classrooms."

Need for administrative and professional support. A mutual sentiment echoed by co-teachers in both focus group sessions was the need for administrative support and professional development for pre-K co-teachers. Each of the co-teachers re-counted similar experiences receiving very little administrative support during critical times in their co-teaching classrooms. Sarah, a special education co-teacher explained that at times she needed support to handle a parent or student. During the approximately hour-long discussion, both groups of co-teachers brought up instances when they felt alone with no one to turn to when challenges

arose in their classrooms. For example, Kerri and Jessy, who were both not returning to co-teaching in the next school year, noted that if they had more support from their administrators they might have stayed.

The data analyzed showed that administrative support looks different for every co-teacher. The need for professional learning sessions was the most documented form of administrative support mentioned by the eight co-teachers. This finding was complemented by the survey results which indicated low scores by all 34 co-teachers on the section that solicited responses about co-teachers' level of professional development received. It was interesting that novice and well-experienced co-teachers all embraced the need for on-going professional development on issues they faced in their co-teaching classrooms. Several general education co-teachers also remarked how they did not receive any guidelines or instruction about working in a co-teaching classrooms, unlike special education co-teachers who have monthly professional meetings. They felt like they were at a disadvantage with no real theoretical or practical guide to participating in this venture effectively. To varying degrees, each co-teacher had different experiences with the administration at their respective schools. However, they all agreed that they wanted opportunities for professional learning that were joint, that is, workshops that included both groups of co-teachers so they can learn together as a team. Additionally, co-teachers stated that they need professional learning opportunities that were catered to children's needs in their classmates. Lastly, co-teachers stressed that if there were more opportunities for professional learning their co-teaching journeys would be less challenging. Table 9 shows a summary of desired professional development on co-teaching.

Table 9

Summary of Desired Professional Development on Co-Teaching

Desired Professional Development Offered
Workshop that supports creating instruction for students with disability population
Observe effective co-teaching
Mentorship program to facilitate on-going school-based support
Pre-K specific curriculum support
Opportunities for reflective practice

Reduce stigma and stereotypes. Both groups of co-teachers highlighted that an inclusive environment like co-teaching classrooms, was a key factor that reduced stigma and stereotypes among the population of students with disabilities. The special education co-teachers felt a sense of fulfillment whenever people entered the classroom and were unaware that there were students with disabilities inside. Sarah cited that she felt a sense of joy whenever her colleagues were not able to identify the students who receive services or even identify the job title of each teacher. This type of classroom environment promoted a sense of satisfaction when the school climate and parents supported this instructional model. One of the other general education co-teachers mentioned that watching the students helping each other and interacting daily in harmony contributed to a positive classroom atmosphere that influenced both groups of co-teachers to work collaboratively and ultimately perceive co-teaching in a positive light.

Enjoy the professional interactions. As the co-teachers reflected and talked candidly about their respective experiences, they all recounted instances where their interaction with their

co-teacher positively impacted their decisions to remain in co-teaching. Five co-teachers admitted that during difficult times –personal or professional –they looked forward to coming to their classroom to share their stories with their teammates. In fact, the data highlighted several co-teachers who referred to the daily laughter, tears, and triumphs with their respective co-teacher as "fulfilling" and motivating them through challenging days. Other co-teachers shared stories about their counterparts having grown into good friends who interacted outside their professional lives. Enjoying the benefits of professional interaction between the two co-teachers also seemed to boost their collaborative skills, which is a critical element for effective co-teaching. This finding was also observed on the second subscale on the PCTS, in which on average all the 34 co-teachers got 40 from a total of 50 to describe their collaborative experiences with their co-teacher. This high measure was an indicator that both groups of co-teachers recognized that the professional partnership played an integral part of their co-teaching experiences.

Boost collaboration skills. Daily interactions between special education co-teachers and general education co-teachers often promotes effective collaborative skills. The joint efforts by both co-teachers to ensure that the needs of students under their watch were met to eventually blend into mutual interdependence. The general education co-teachers who participated in the focus group discussions talked about how they have learned how to work cooperatively in a classroom with another individual. According to those general education co-teachers, the daily interplay of planning, organizing, and sharing promoted strong collaborative ties between professionals. One co-teacher has been working for over eight years as a general educator, recalled that it was very hard for her to transition to a co-teaching classroom where she was

expected to have collaborative skills. However, she slowly learned to share with her teammate to gain the full benefit of effective collaboration.

Moreover, special education co-teachers also embraced co-teaching as the major component in developing their shared goals. One co-teacher stated that "you really have to be prepared to rely on the other" in order to solve problems and complement each other in classroom responsibilities. Generally, each co-teacher acknowledged the importance of collaboration in the endeavor to develop and sustain successful pre-K co-teaching classrooms. Therefore, both groups of co-teachers applauded this type of instructional model for affording them the opportunity to learn the importance of collaboration. Overall, both special and general education co-teachers shared perceptions of their co-teaching experiences; however, there were also distinct differences between those co-teachers' perceptions.

Differences in special and general education co-teachers' perceptions.

Both general and special education co-teachers in both focus group sessions stated differences in their perceptions of their co-teaching experiences. The major differences debated among the eight co-teachers were about inequitable roles each group of co-teachers performed in their co-teaching classrooms. For example, special education co-teachers stated that they performed supporting roles and their general education counterparts performed instructional and leadership roles. The following section discussed the major differences indicated in both focus group sessions.

General education co-teachers performed the lead roles. The data showed that both special and general education co-teachers openly associated lead teacher status with the general education co-teacher. Among the eight participants, only one special education co-teacher assumed the lead role, which may have been due to the inexperienced of her general education

counterpart who was in her first year of co-teaching. All other special education co-teachers pointed to the general education co-teachers as the lead in the classroom. When the general education co-teachers were asked "who assumed the lead role in their co-teaching classroom?" while some appeared bashful, others did not hesitate to identify themselves as "the co-teacher who assumed the lead role or take on more of the instructional lead."

Furthermore, the general education co-teachers all attested that their greater effort in planning instructions, teaching most lessons, and communicating with parents put them in a leadership position. While some general education co-teachers shied away from openly admitting that they assumed most of the leadership roles in their classrooms others agreed with the special education co-teachers and stated that they were indeed the "go-to" teacher in their co-teaching classrooms. There was no disparity or contention among both groups about this role being assumed or given to the general education co-teacher. However, there were disagreement about why most co-teacher justified the general education co-teachers' leadership role in co-taught classrooms.

As a result, the four special education co-teachers were concerned that their professionalism was not respected enough to get the lead role. Sammy, a special education co-teacher, stated that there was a common belief that general education co-teachers were better than special education co-teachers at instructional tasks and leading the classroom due to their training and experience. While some special education co-teachers were indifferent about their teammates performing all leadership roles, some were negatively affected and wanted their expertise to be acknowledged. Therefore, the lack of parity in leadership in co-teaching classrooms can lead to inequitable roles.

Inequitable roles performed. Both groups of co-teachers were outspoken about inequitable roles performed inside their co-teaching classrooms. Most of the general education co-teachers argued that the roles were not inequitable but were associated to both co-teachers levels of training and expertise. Two special education co-teachers' contested this argument and contended that "many special education co-teachers were also general education teachers prior to changing titles to special education." However, the other two special education co-teachers agreed with their general education counterparts and argued that "while the roles may seem unfair, they are not since there are many roles that are done by the special education co-teachers that are not noticeable." They provided examples, such as writing IEPs, recording data, preparing supplemental materials for individual students, and differentiating instructions. Therefore, they pointed out that performing half of the instructional roles like planning every lesson, making materials for each lesson, writing all the lesson plans, and preparing and grading assessments would be pose an insurmountable challenge to effective classroom functioning.

Special education co-teachers perform mostly supporting roles. All eight participants expressed the view that special education co-teachers performed more of "an assistant role" and were not viewed by others as the "one in charge." On one hand, when asked "What types of roles would be classified as assistant roles?" two special education co-teachers simultaneously responded by saying "non-academic or instructional task," such as classroom management, behavior management, and art and craft projects. On the other hand, one general education co-teacher argued that special education co-teachers performed specific roles because of their areas of expertise. Jessy, a special education co-teacher, supported this view and said, "there was no way she could successfully do her job if she had to teach and plan more lessons." Therefore,

Jessy maintained that her current roles and responsibilities were valued and important similar to her general education co-teacher's roles performed."

A follow-up question was asked to allow the co-teachers to voice their opinions about how they felt about their roles and if they wanted to perform other roles. There was a brief silence, then Jill stated that she would like to be included in more instructional decisions in the classroom even if she were not the one teaching the lesson. Furthermore, she stated that more involvement in instructional planning would be easier to tailor lessons to meet the needs of individual students. Other teachers (from both groups) commented that they also had disparities in terms of division of roles. Kim explicitly stated:

> Special education co-teachers cannot complain too much about not being able to perform more tasks than us [general education co-teachers] because to be fair we are experts in delivering the content and they [special education co-teachers] are better than us in literacy development and differentiating instructions so there should be no problem about who does what. I mean it's just different positions that require different people to do the specific jobs. So I just don't understand why they feel bad. Well I also get it if their co-teacher is not being respectful or not being a team player other than that everyone has their own duties and that is how a good team is. [Co-teaching] is like a factory -everyone has different talents and skills to function as one whole.

The data analyzed, showed that most of participants held different opinions about the roles performed by special education co-teachers in pre-K co-teaching classrooms. Table 10 shows the major differences in special and general education co-teachers' perceptions of co-teaching.

Table 10

Differences in Special and General Education Co-Teachers' Perceptions of Co-Teaching

Special Education Co-Teachers Perceptions	General Education Co-teachers Perceptions
Expert in reading and literacy development	Experts in organizing and academic content
Provides differentiated instructions	Primary instructor for teaching most of the academic content
Support positive classroom behavior management	Take the lead on students' assessments and evaluations
Co-teaching improve academic outcome for students with disabilities	Having another capable adult in the classroom is a plus
Help to improve their content knowledge	Get more time to work with students with varying needs
Learn to compromise/share roles and responsibilities	Learn strategies and techniques used by special education co-teachers

The following section discusses the findings of research question 3 and was generated from the analysis of the focus group data.

Focus Group Results

Research Question 3: What elements of self-efficacy influence pre-K general education and special education co-teachers' perceptions of co-teaching?

Co-Teachers' Self-Efficacy in Co-Teaching

Seven out of eight co-teachers indicated that they had high self-efficacy in co-teaching which, was supported by each co-teacher's response to the question "How confident are you to

do your daily co-teaching roles and responsibilities?" It was evident that their self-efficacy in co-teaching played a critical role in their respective classrooms as they identified their strengths and specific abilities used to achieve goals in spite of challenges faced. Co-teachers also had a light-hearted disposition when they talked about how they stayed motivated and encouraged other co-teachers who were new to "stick it out as it will get easier as the years past." It can also be interpreted that co-teachers were efficacious, by them taking deeper interest to learn more about co-teaching from more knowledgeable peers and advocating to their administrators for additional professional development opportunities.

Seven of eight participants argued that both groups of co-teachers had high efficacy in co-teaching. This was demonstrated by their stories depicting "enthusiasm," "joy," "self-determination," "experiences," "social influences," and "student success." All but one co-teacher expressed love for co-teaching as an instructional model in their answers to the question, "How do you perceive challenges in co-teaching?" The data showed that co-teachers interpreted challenges as "opportunities to learn something new," "trial and error," and "everyday life experiences." Kim, elaborated on two occasions that demonstrated self-determination and showed the influence of their co-teaching peers. Different elements of self-efficacy influenced special education and general education co-teachers' perceptions of co-teaching. The results obtained from both focus groups showed a predominance in two (modeled experience and social and verbal persuasion) out of the four sources of self-efficacy. However, co-teachers' were efficaciousness in co-teaching were derived from all four sources of self-efficacy: mastery experiences, emotional/psychological state, modeled experiences, and social and verbal persuasion (Bandura, 1997).

Mastery experiences. Among the eight co-teachers who participated in the focus group sessions, only one co-teacher had five years of co-teaching experience. The other co-teachers had an average of two years of co-teaching experiences. This was also reflected in the data when Kim, expressed that she felt "comfortable to take on any co-teaching roles and responsibilities." She also stated that "co-teaching was hard in the beginning," but every year she grew stronger and learned from previous years' mistakes. While Kim's self-efficacy in co-teaching may have been based on other sources, it appeared that her self-efficacy in co-teaching was predominantly gained from her years of experience as a co-teacher.

Emotional/Psychological state. The co-teachers who responded that they were confident when faced with challenges in their co-teaching classroom also acknowledged that their positive attitude about co-teaching led them to carry out their jobs assertively. In fact, in response to the question "How do you deal with challenging situations in co-teaching?" Jill acknowledged experiencing some difficulties but also stated that she loved the co-teaching model and felt happy serving the kids in her class. Similar viewpoints were consistent among the participants in both focus groups. They also used phrases like "for the kids, you'll make it happen," "if you enjoy your job then it won't feel like work," and "I tend to compromise and remain cheerful because I want it to work out."

Modeled experiences. Other co-teachers developed their co-teaching abilities by observing and modeling their teammates perform their roles then follow suit. However, many co-teachers objected the limited professional learning opportunities that provided modeled experiences of effective co-teaching. They also acknowledged that observing their co-teaching peers performing co-teaching roles helped them to make the most of their co-teaching experiences. Co-teachers like Iris and Jill, having one and two years co-teaching experience

respectively, admitted that they learned a lot and built their confidence as co-teachers by modeling some of what they saw their co-teachers do. This modeling helped them to strengthen their abilities and become competent and confident in areas that were initially challenging for them.

Social and verbal persuasion. From the conversations, memo, and focus group data, it seemed like all seven co-teachers who indicated that they had high self-efficacies in co-teaching were influenced the most by social and verbal persuasion. Both special and general co-teachers talked about their experiences with their co-teaching partners who through social and verbal influences built their co-teaching efficacy skills. For instance, Gina stated that she depended on a lot on motivation from her counterpart during times of difficulty. She said that her special education co-teacher's verbal praises, thumbs-ups, and daily conversations about their roles performed helped to improve her co-teaching skills. Other co-teachers shared similar sentiments attributing their abilities to successfully carry out their co-teaching tasks to the social and verbal interaction from their peers.

Summary

The findings from both phases of the study were presented individually and then integrated to answer the research questions guiding this study. In response to research question one, this study found that overall pre-K co-teachers have fairly positive perceptions in their current co-teaching classrooms. Professional interpersonal relationships between pre-K special education and general education co-teachers foster positive perceptions of their co-teaching experiences. Pre-K co-teachers desired personalized professional learning opportunities to guide and improve their co-teaching experiences and recognize the importance of effective verbal communication as the key to successful co-teaching experiences. Regarding similarities and

differences between general education and special education teachers (research question two), this study found that special and general education co-teachers shared more similarities than differences in their perceptions of co-teaching. When differences in perceptions of co-teaching did appear, they were related to perceived roles in the classroom such as lead versus support. Some special education co-teachers described these roles as inequalities.

This study was framed by self-efficacy, a major principle of Bandura's *Social Cognitive Theory* (1997). Research question 3, guided by specialized analysis, focused on self-efficacy defined as the belief in one's capabilities to organize and execute the course of action required to manage prospective situations (Bandura, 1977). This study found that the majority of the co-teachers showed high levels of self-efficacy in co-teaching. These results also showed that the majority of co-teachers developed their efficaciousness from social and verbal interpersonal relationships and modelling proficient co-teachers perform their co-teaching roles. The significance of these findings is discussed in the next chapter, including implications for co-teachers, teacher educators, and administrators. The recommendations for future research and practice are also discussed.

CHAPTER 5 DISCUSSION

Introduction

This chapter discusses the main findings of the study. The integration of phase 1 and phase 2 results was generated to discuss topics related to special and general education co-teachers' experiences in their pre-K co-teaching classrooms. These topics are closely aligned to the unique composition of pre-K co-teaching classrooms and both co-teachers' experiences as it relates to their: (a) Shared Positive Perceptions of Co-Teaching, (b) Self-Efficacy in Co-Teaching, and (c) Desire for Professional Development. Several limitations are discussed and implications for co-teachers, teacher educators, and administrators are presented.

Pre-K Co-Teaching Classrooms: Contextual Considerations

Pre-K co-teaching classrooms are unique educational settings that provided insight into understanding the results of this study. Unlike other researchers (e.g., Austin, 2001; Deiker & Murawski, 2003; Keefe & Moore, 2004; Zigmond, 2004) who investigated perceptions of co-teaching in elementary, high school or a combination of both, this research focused on co-teachers who taught exclusively in public pre-K co-teaching classrooms. These state-funded classrooms have distinctive features that are inherent to pre-K classrooms and differentiates those co-teachers' experiences from other co-teachers who work in other classroom settings. One distinctive feature is that both special and general education co-teachers work together in the same classrooms for full day of instruction rather than shorter intermittent periods of work with students. In addition, the co-teaching team in pre-K classrooms includes an assistant teacher.

In typical co-teaching classrooms (in elementary grades) the general education teacher is the lead teacher for a class and has an assigned special education teacher who comes to the classroom for varying hours per week (on average, one hour daily). During this time, the two

teachers co-teach a specific subject discipline. According to Cook (1995), *one teach, one assist* is the predominant co-teaching approach used in these settings. Typically, the general education teacher takes the lead in providing instructions to the class, while the special education co-teacher provides differentiation of instruction and support of individual student learning. While these models of co-teaching classrooms provide opportunities for the elementary education special and general education co-teachers to plan, teach, assess, and interact with each other, frequency and amount of these opportunities are less frequently applied to pre-K classrooms. In pre-K co-teaching classrooms, both co-teachers are expected to work together and share all the roles and responsibilities in the class for the entire school day. As a result, both pre-K co-teachers benefit from the prolonged engagement and daily interactions, which offers one explanation for why special and general education co-teachers in this study reported positive perceptions of their co-teaching experiences and especially the personal relationships cultivated through these experiences.

However, this study found out that even though the nature of pre-K classrooms offered teachers time together, it also challenged equitable roles for each professional. Because typical pre-K classrooms have a lead teacher and a support teacher (often paraprofessional), that structure influenced the way in which teachers in this study perceived their roles and potential. Both groups of co-teachers stated that one of the biggest challenges in their classrooms was dividing classrooms roles and responsibilities. As a result, both groups of co-teachers admitted that finding a balance was the cause of major conflicts in their classrooms. Moreover, special education co-teachers argued that they frequently performed more supporting roles while their partners performed instructional roles. Therefore, the lack of parity between the two professionals reflected traditional pre-K classroom arrangements, where the general education

teacher assumes the primary role with the support of a teacher assistant. In the co-teacher literature, disputes about inequitable roles posed a challenge to both co-teachers (Phillips & Sapona, 1995; Scruggs et al., 2007). This study illustrated that the pre-K classroom context is a unique setting for co-teaching. While pre-K classrooms offer extended time for building professional teaching relationships, the traditional teacher lead-support structures need to be modified in order to take advantage of each teacher's expertise in the teaching and learning process and to foster positive perceptions of the co-teaching process.

Co-Teachers Share Positive Perceptions of Co-Teaching and Each Other

In pre-K co-teaching classrooms, both teachers spend an average of 40 hours per week and over 1,440 hours each school year working collaboratively. Working closely with another professional daily to plan, teach, solve problems, among other teacher-related tasks, can be one of the motivating factors that strengthen most co-teachers' relationships with each other. Both data sources revealed that special and general education co-teachers had mutual beliefs and viewpoints regarding co-teaching. This was an interesting finding and somewhat different from previous literature that studied both groups of co-teachers' perceptions (Austin, 2001; Austin, 2004; Norton, 2013; Robinson & Buly, 2007) and found that, typically, one group of teachers reported greater positive perception than the other.

Therefore, it can be argued that the unique features of pre-K co-teaching classrooms have the potential to promote high levels of collaboration between both professionals. Pioneer researchers, Cooke and Friend (1995) stressed that co-teachers need to build strong partnerships. They argued that co-teaching is more than just two teachers sharing professional responsibilities in a classroom and should not be viewed simply as an instructional model. Indeed, other researchers have warned that co-teaching is more than that, and instead should be considered as a

"multilevel process of collaboration" involving co-teachers' perceptions, philosophical beliefs, strengths, and weaknesses (Dahlam & Hoffman, 2012, p. 43) Therefore, co-teachers who have opportunities for extended time together with the common purpose of providing quality instruction for children in the classroom may develop the types of personal relationships necessary to solve problems endemic to the model (e.g., equity in roles performed, value each other's expertise) and resolve conflicts that challenges co-teaching effectiveness.

Special and general education co-teachers' shared similar perceptions. Shared positive perceptions among co-teachers shared suggested that they may also experience similar benefits and challenges in their collaborative experiences. The core of a co-teaching model requires a shift in thinking and pedagogical practices, which places multiple expectations on both teachers. This the professional relationships built between respective co-teachers in this study may be an attribute of their shared positive perceptions. Equally important is the fact that it is necessary for pre-K students at the foundational stages of early learning to be taught by teachers who value their teaching experiences. Therefore, one cannot overlook the influence of pre-K classrooms and the impact they may have in developing professional interpersonal relationships between special and general education co-teachers. Both groups of co-teachers' perceptions of co-teaching are similar due to daily interactions and experiences they share in the same physical space.

Daily interactions between special and general education co-teachers working in the same classrooms also results in disputes or conflicts. The participants of this study agreed that these conflicts and tensions were another factor that supported their positive relationships and shared perceptions of co-teaching. Co-teachers perceived these conflicts as opportunities to talk about issues they faced and find amicable resolutions to move forward. Both groups of co-teachers

stated that despite conflicts that arose, they were able to maintain positive relationships due to their mutual respect and their love for their jobs. Overall, this study indicated that the value of daily interactions between the two professionals helped them to develop a sense of interdependence, collaboration, and self-efficacy driven by shared positive perceptions and personal relationships supportive of the co-teaching model.

Co-Teachers Develop Self-Efficacy Through Co-Teaching

This study was grounded in Bandura's *Social Cognitive Theory,* especially the principle of self-efficacy and its influence in explaining tasks carried out by individuals (Bandura, 1986). If administrators want to see co-teachers work with more enthusiasm and participate in successful co-teaching, then they should provide professional development opportunities that boost their co-teachers' self-efficacy in co-teaching and that will influence their perceptions of co-teaching (Bandura, 1986). We cannot ignore the reciprocal relationship between co-teachers' requisite skills to carry out the task of co-teaching and their convictions that they can competently perform this task (Pajares, 1996a; Tschannen-Moran & Woolfolk Hoy, 2001).

Research indicates that teachers with moderate to high self-efficacy persevere during challenging times and take more risks to improve their performance (Bandura, 1997). In the current study, it was evident that although the teachers' perceptions were not exceptionally high, the teachers persisted in meeting the challenges they encountered in co-teaching, despite limited administrative support and professional development. They welcomed the idea of professional development where they and their co-partners could collaborate to provide more meaningful learning opportunities for their students. Unfortunately, if this request is ignored then co-teachers' perceptions of co-teaching can be negatively affected, which might have implications for co-teachers' abilities to carry out their co-teaching responsibilities and, in some

cases leave. In this study, data from a focus group indicated the many challenges of co-teaching and how important ongoing support is for teachers in this setting. Due to lack of professional development, two co-teachers decided that they were not returning to co-teaching the next school year. These were co-teachers who also reported positive perceptions and healthy interpersonal relationships, which were however, not enough to make them reconsider their decisions. Therefore, it is essential for district personnel to pay close attention to co-teachers' professional desires and support them to minimize teacher burnout. When one expects co-teachers to perform tasks for which they feel less confident, their self-efficacy is usually negatively affected (Guskey & Passaro, 1994). Therefore, supporting co-teachers' efforts in co-teaching classrooms by providing desired on-going professional learning should provide the foundation to improve co-teaching experiences.

Co-Teachers Desire On-Going Professional Development Together

This study found that co-teachers, on a whole, desired consistent professional learning opportunities from their administrators. While they acknowledged and were pleased with other types of support (resources, materials, and district policy and guideline professional development), they believed that they would perform their respective roles and responsibilities more effectively if personalized trainings were offered. This finding was consistent with other studies that found that teachers recommend professional learning as an important approach to minimize challenges faced in co-teaching settings (Kilanowski-Press, Foote, & Rinaldo, 2010; Scruggs, Mastropieri, & McDuffie, 2007). In this study, co-teachers in both focus group sessions requested professional development workshops that included both group of teachers. This further supports considering the team as a unit for instruction and learning, rather than the individual and is a good indication that both co-teacher saw the advantages of collaborative learning and would

welcome additional opportunities to continue building the working relationship. Research conducted by Murray (2004) indicated that a limitation in their study was not including both groups of co-teachers in professional development workshops. Therefore, it seems advisable that professional development must be planned and implemented with co-teaching pairs and teams rather than a homogenous group by traditional roles.

Limitations

Several elements impacted this explanatory sequential mixed-methods research despite measures taken to minimize these limitations. According to Merriam (2009), a study's limitations are the characteristics that impacted the interpretation of the results. The first limitation is that I am the primary researcher and collected the data for this study, which inherently introduced my own biases and may have affected the results. Like the participants, I'm also a co-teacher who might hold similar or different beliefs of co-teaching. While being an insider affect personal biases, it also provided me with an insider privilege to access this context and gain insight about the research problem. Besides, a part of my legitimation process was to disclose my subjectivity in chapter three and I also practiced the technique of "bracketing" my experiences during the focus group discussions.

The second limitation is that the survey and focus groups data on special and general education co-teachers' perceptions of co-teaching were based on their self-reports. Self-reported data generated from the survey assessments and focus groups may contain biases held by participants that cannot be objectively verified. For instance, social desirability might have affected the co-teachers to report or say what they think I may have wanted to hear and not what they wanted to say. This may also impact the interpretation and findings of the study.

The third possible limitation of this research is that it studied a homogeneous population of pre-K co-teachers from only one school district. The small sample size of 34 co-teachers for phase 1 and 8 co-teachers for phase 2 limits the generalizability of the study.

A fourth limitation is that there was no test of significance not run on the survey data due to the small sample size, and as a result, this research was not able to analyze co-teachers' responses across variables such as teaching experiences and their perceptions held of co-teaching. The last limitation of this research is that the heterogeneous grouping for both focus group sessions might have limited what the participants' had to say or made them mindful of not offending their colleagues.

Implications for Practice

For Administrators

This study can be used to inform district level policy makers, curriculum coordinators, and school administrators about challenges co-teachers experience and how on-going administrative support can help to minimize them. Administrators could also establish clear roles, set expectations, and clarify responsibilities for co-teachers to facilitate successful co-teaching. Therefore, to set clear, achievable goals, administrators should include both co-teachers in the decision-making process and ensure that both parties understand the professional expectations and set up democratic routes for resolving conflicts. Usually, the most successful co-teaching teams are those co-teachers who volunteer for the position or those who are supported throughout the transition into this role.

Therefore, administrators should avoid placing teachers into co-teaching classrooms if they are not comfortable or do not think they have the skills required to fully participate in these collaborative experiences. If teachers without any previous experiences want to volunteer for co-

teaching jobs, school and district level personnel should prepare and support those teachers to perform their jobs. The results of this study indicated that support systems should consist of some form of continuous mentorship until co-teachers are at a level of independence to perform most of their co-teaching roles and responsibilities.

For Co-Teachers

The findings of this study can help general and special education co-teachers minimize challenges encountered in co-teaching classrooms. Underlying this research finding is the role teacher perceptions play in both co-teachers' experiences in their classrooms. Becoming more aware of these opinions is the first step towards mitigating challenges teachers may have with their own beliefs about collaboration and sharing a work space with another professional. Understanding that teachers and their co-partners embrace the interpersonal relationships gained from their co-teaching experiences, encouraging co-teachers to engage in open discussions about each other's strengths and weaknesses may be a great place to start in maximizing collaboration between both teachers. On-going personal reflection and respectful communication can address potential misunderstandings among new and current teachers, as well as those who will be taking on co-teaching in the future.

The results of the study can be used by co-teaching pairs at all grade levels to guide their co-teaching experiences to avoid common sources of misconceptions and misunderstandings about co-teaching roles and expectations. Co-teachers who are currently in their first year or new to this instructional model may find the results useful in building a professional relationship based on mutual respect with their co-partners. Effective communication was found to be a valuable tool to mitigate potential tension and conflicts. The biggest conflict found was sharing classroom roles equitably so special education co-teachers did not feel stifled performing only

supporting roles. Therefore, finding a middle ground through compromise was found to be a helpful strategy used by both groups of co-teachers to avoid and resolve conflicts. The study also found that having time to plan and set clearly defined equitable roles and responsibilities was a necessary first step to provide a clear pathway towards a successful partnership. Apart from the general findings for both co-teachers, there were also explicit implications found in this research that could benefit each group of co-teachers.

Special and general education co-teachers should embrace each other's professional expertise and specialized skillsets in co-teaching classrooms. The findings of this and other studies (e.g., Leatherman & Niemeyer, 2005; Roberts, 2004) illustrated that both teachers are more successful in co-teaching settings when they use each other's strengths to complement overlapping weaknesses. Therefore, suggestions for special education co-teachers include, (a) communicating expectations and areas of strengths and weaknesses, (b) being open to learning specific grade content curriculum, (c) offering to assist with behavioral and literacy advise, and (e) being resourceful and offering to share workload. Specific implications for general education co-teachers include: (a) communicating expectations and sharing strengths and weakness, (b) sharing classroom roles equitably with special education co-teacher, (c) including special education co-teachers in planning, and (d) being open to deepening their own knowledge and strategies to work with students with special needs. Therefore, establishing a partnership that considers the students' best interests, that works on a professional relationship based in mutual respect, and that values the potential of co-teaching may change the way teachers collaborate and promote more effective co-teaching.

Both novice and seasoned co-teachers should embark on improving their self-efficacy in co-teaching to improve their co-teaching experiences. Notably, some of the challenges

experienced by both group of co-teachers can be lessened if they felt competent to perform their respective roles. Furthermore, co-teachers would experience less tension and conflict if they both believed that they persevered through adversities (Bandura, 1997). Co-teachers should also seek out and advocate for opportunities that will improve their co-teaching abilities, such as mentorship programs, professional development, peer interaction, and modeling from other experienced co-teachers or any other forms of learning that will expand their abilities in co-teaching.

For Teacher Educators

Teacher educators can capitalize on the results of this study to inform their programs and courses offered to prospective teachers. In this study, none of the co-teachers knew enough about co-teaching when they began. Furthermore, co-teachers who had theoretical knowledge from special education courses they took were less prepared regarding the execution and practice. However, it would be beneficial to provide courses that supported areas in which the literature found they struggled, such as special education co-teachers' lack of content knowledge, equitable distribution of roles and responsibilities, resolving conflicts, and effective communication. It would also be useful to immerse prospective teachers in coursework that helped them to integrate theory and practice. Having numerous opportunities to observe and actively participate in co-teaching classrooms would also prepare pre-service teachers to understand the application aspect of co-teaching. Teacher preparation programs should also incorporate in their coursework positive attitudes towards professional collaboration.

In this study, none of the co-teachers volunteered for their co-teaching positions and were offered the job based on availability. Therefore, each pre-service student should be required to take courses to learn about this instructional model so they can be more competent and confident

if they were to accept a co-teaching positions. Engaging in these activities in their pre-service programs may help them to develop positive perceptions of co-teaching and ultimately higher self-efficacy as well.

It is also important that teacher educators advocate and create courses that respond to the needs of diverse student populations and provide opportunities for teachers to get certification in other than general education. Providing multiple routes for teachers to get different endorsements and certifications may help teachers to be more resourceful and build capacity for teachers to serve the growing needs in their classrooms. Diversifying teacher education has the potential to broaden the scope of teachers to see the bigger picture and move away from the traditional "teacher roles" and embrace successful collaborative classrooms as the way forward.

Directions for Future Research

Studies of co-teachers' perceptions of co-teaching have focused on the elementary, middle, high school, and college-age populations. The current study loked at co-teachers' perceptions of co-teaching in pre-K classrooms. Future research should focus on similar populations in order to compare findings. Other research might concentrate on co-teachers' self-efficacy in co-teaching and strategies to build and sustain co-teachers' efficacy in performing this task at all levels. Additionally, since this study examined pre-K co-teachers' perceptions, other studies might investigate co-teachers' efficacy in co-teaching, which is directly related to their perceptions.

Another direction future research could take is to evaluate teaching programs at the pre-K level across counties and states to improve policy and guidelines to improve best practices using this instructional model. The appropriateness of comparing co-teachers with high self-efficacy and those with low self-efficacy might be explored in future research as it cannot be assumed

that co-teachers with high self-efficacy would yield higher proficiency than their counterparts with low self-efficacy.

Future research can investigate the impact of pre-K classroom and this unique context implement co-teaching. This may provide insights to build capacity among pre-K classrooms and other grade levels who uses this instructional model. Exploring the co-teaching learning in pre-K classrooms can help to address questions like: Is it the pre-K classroom? Is it the time together? Is it the developmental level of the learner? Look at other types of school settings-rural or smaller districts. Also, studies can also look on the physical infrastructure of pre-K classrooms to ascertain whether if it's the actual space within the teaching context that promote the positive relationships between both groups of co-teachers. Therefore, studies should rely on observational data to examine physical space and to analyze how teachers worked together.

Finally, studies can also examine how professional development sessions supported by school districts and school administration work on building and sustaining effective co-teacher relationships. Related research might also explore the influence of professional social interaction between pairs of co-teachers and how it affects both co-teachers' collective efficacy in co-teaching. Overall, the results from this research can serve as building blocks for future studies.

Final Thoughts

To conclude, this study sought to shed light on a complex phenomenon and to better understand pre-K special and general education perceptions of co-teaching and to, identify similarities and differences between special and general education co-teachers' perceptions of co-teaching as well as the elements of self-efficacy that influence these co-teachers' perceptions of co-teaching. Co-teachers who look beyond the extrinsic benefits of co-teaching and towards professional camaraderie as the main source of motivation tend to have positive co-teaching

experiences. The findings of the study emphasize the nuances of special and general education co-teachers and the complexities of effectively working collaboratively in pre-K classrooms. Meaningful co-teaching calls for awareness by both co-teachers that having a positive belief about this instructional model will help them to persevere during times of challenges. This study represents a small fragment of what we can learn about co-teachers' perceptions of co-teaching. Therefore, if co-teachers want to maximize the full potential of this instructional model, much more research needs to be done to learn how to develop strong professional relationships that boost co-teachers' self-efficacy in co-teaching at the pre-K level.

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APPENDICES

Appendix A: Perceptions of Co-Teaching Survey

(Austin, 2001)

Definition of Terms **Collaborative Teaching or Co-Teaching** refers to the assignment of a general education teacher and a special education teacher to work together, sharing responsibility for the planning and execution of instruction. **Collaborative Teachers or Co-Teachers**, as defined for the purposes of this study, are general and special education teachers who are teamed for providing instruction to a heterogeneous pre-K class for the entire school day. **General Education Teacher** refers to any teacher certified to provide instruction in a pre-K, elementary level classrooms or a secondary level subject area. **Special Education Teacher** refers to any teacher certified to provide instruction to any student in grades P-K-12 who is classified as having one or more disabilities.

Q1 Check the content area(s) that you teach collaboratively.

- ○ Reading
- ○ Social Studies
- ○ Science
- ○ Literacy/Language Arts
- ○ Mathematics
- ○ Arts
- ○ Other_____

Q2 Please mark the area of certification in which you are currently employed.

- ○ Special Education
- ○ General Education

Q3 Check the highest level of education you have achieved.

- ○ Bachelors
- ○ Masters
- ○ Masters
- ○ Specialist
- ○ Doctorate

Q4 What is your gender?

- ○ Male
- ○ Female

Q5 How many total years of teaching experience do you have?

_____

Q6 How long have you been a co-teacher?

_____

Q6A How many years have you been working with the same co-teacher?

_____

Q7 Did you volunteer for this co-teaching experience? Please check one answer.

○ Yes

○ No

PART TWO Co-Teacher Perceptions of Current Experience

Please circle a number from 5 to 1 to indicate your level of agreement or disagreement with each statement below about co-teaching.

Click to write the question text

	Strongly Agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
Q8. My co-teaching partner and I work very well together.	○	○	○	○	○
Q9. Collaboration has improved my teaching.	○	○	○	○	○
Q10. In my collaborative experience, I do more than my partner.	○	○	○	○	○
Q11. Co-teaching is a worthwhile professional experience.	○	○	○	○	○
Q12. My partner and I solicit each other's feedback and benefit from it.	○	○	○	○	○

Recommended Collaborative Practices Please circle a number from 5 to 1 to indicate your level of agreement or disagreement with each statement below about co-teaching. You are asked to rate each statement according to: (a) your belief in the value of the practice.

Do you value in the value of these practices?

	Strongly Agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
Q13. Co-teachers should meet daily to plan lessons.	○	○	○	○	○
Q14. Co-teachers should share classroom management responsibilities.	○	○	○	○	○
Q15. Co-teachers should share classroom instruction.	○	○	○	○	○
Q16. Co-teachers should regularly offer feedback.	○	○	○	○	○
Q17. Co-teachers should establish and maintain specific areas of responsibility.	○	○	○	○	○

Please circle a number from 5 to 1 to indicate your level of agreement or disagreement with each statement below about co-teaching. You are asked to rate each statement according to: whether you currently employ the practice.

	Strongly Agree	Agree	Neither Agree nor Agree	Disagree	Strongly Disagree
Q18. Do you and your co-teacher meet daily to plan lessons?	○	○	○	○	○
Q19. Do you and your co-teacher share classroom management responsibilities?	○	○	○	○	○
Q20. Do you and your co-teacher share classroom instruction?	○	○	○	○	○
Q21. Do you and your co-teacher offer regular feedback to each other?	○	○	○	○	○
Q22. Do you and your co-teacher establish and maintain specific areas of responsibility?	○	○	○	○	○

Teacher Preparation for Collaborative Teaching What kinds of academic preparation do you think would be beneficial to collaborative teaching? Please circle the number from 5 to 1

beside each of the following academic preparations that best describes your perception of its usefulness to a collaborative teacher.

	Very Useful	Someone Useful	Of Limited Use	Not Useful	Don't Know
Q23. Student teaching placement in co-teaching class.	○	○	○	○	○
Q24. School district in-service presentations on alternative assessment.	○	○	○	○	○
Q25. School district workshops/mini courses on facilitating co-teaching	○	○	○	○	○
Q26. Mentoring by experienced collaborative teacher(s)	○	○	○	○	○
Q27. Pre-service courses in collaborative teaching.	○	○	○	○	○
Q28. Pre-service special education courses for general education teachers.	○	○	○	○	○
Q29. Pre-service general education courses for special teachers	○	○	○	○	○

	Very Useful	Someone Useful	Of Limited Use	Not Useful	Don't Know
Q23. Student teaching placement in co-teaching class.	○	○	○	○	○
Q24. School district in-service presentations on alternative assessment.	○	○	○	○	○
Q25. School district workshops/mini courses on facilitating co-teaching	○	○	○	○	○
Q26. Mentoring by experienced collaborative teacher(s)	○	○	○	○	○
Q27. Pre-service courses in collaborative teaching.	○	○	○	○	○
Q28. Pre-service special education courses for general education teachers.	○	○	○	○	○
Q29. Pre-service general education courses for special teachers	○	○	○	○	○

School-Based Supports that Facilitate Collaborative Teaching What kinds of school-based services should be provided in order to facilitate co-teaching? For the purpose of this study, school-based services are defined as services including teaching materials/equipment,

administrative support, and provision of adequate planning time. Please circle a number from 5 to 1 to indicate the importance you place on each of the following school-based supports.

Click to write the question text

	Very Useful	Somewhat Useful	Of Limited Use	Not Useful	Don't Know
Q30. Provision for scheduled mutual planning time.	○	○	○	○	○
Q31. Administrative support for co-teaching	○	○	○	○	○
Q32. Adequate teaching aids and supplies appropriate to learning levels.	○	○	○	○	○
Q33. In-service training opportunities provided (workshops, etc.).	○	○	○	○	○
Q34. Summer planning time allocated.	○	○	○	○	○
Q35. Opportunities to modify classroom configuration.	○	○	○	○	○

APPENDICES

Appendix B: Focus Group Demography Survey

Please respond to the following questions.

1. Name: _____

2. What is your gender?

○Female ○Male

3. What is your highest degree?

○Bachelor's Degree

○Master's Degree

○ Ed. S Degree

4. What role do you play in your co-teaching classroom?

○General Education Teacher

○ Special Education Teacher

5. How long have you been teaching in that role?

○1- 3 years

○4-6 years

○7-9 years

○ 10 or more years

6. Have you taught with the same co-teacher each year?

○yes

○no

APPENDICES

Appendix C: Focus Group Protocol

AN EXAMINATION OF PRE-K CO-TEACHERS' PERCEPTIONS AND SELF-EFFICACY IN THEIR PRESENT CO-TEACHING EXPERIENCES

I. Background on co-teaching experience

A. Please state your name and position at Positive Elementary (pseudonym)?
B. How long have you been working as a general or special education teacher?
C. Please tell me how you started co-teaching?
D. Tell me what does the term 'co-teaching' means to you?

II. Perceptions of Co-teaching

A. What were your initial thoughts about co-teaching and how might have these affected your view of beginning a co-teaching partnership?
B. What are your personal goals of being a co-teacher?
C. What would you say some of your strengths are as a co-teacher?
D. What do you believe some of the major challenges you experience as a general or special education co-teacher?
E. How have these challenges impacted your opinion about co-teaching?

III. Similarities and Differences between General and Special Education Co-Teachers Perceptions of Co-teaching

A. Tell me about some specific tasks you perform and responsibilities you have in your present co-teaching classroom?
B. How were these roles/responsibilities assigned?
C. Share with me some of the similarities and differences between you and your partner as it relates to planning, teaching, and assessment in your co-teaching classroom?
D. When differences arise, how do you and your partner resolve conflicts?

IV. Influence of Self-Efficacy on Co-teachers' Perceptions of Co-teaching

A. How confident were you to carry out your co-teaching roles?
B. How confident were you to teach and cater to the diverse learning needs of students?
C. Tell me about any motivating factor(s) that help boast your abilities to perform your co-teaching task?
D. Share with me some of your initial impressions of co-teaching and whether these influenced or hindered your confidence level to be a successful co-teacher?
E. How do you perceived challenges faced in co-teaching?

V. Closing Questions

A. Is there anything else you would like to share about your co-teaching experience?